THOUGHTS

ON

SPECULATIVE COSMOLOGY

AND

THE PRINCIPLES OF ART.

BY

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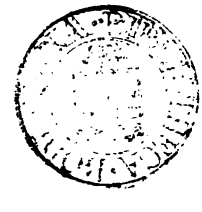
AND OTHER WORKS.

LIBER ANALOGIIS NATURÆ FUNDATUS EST.



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PREFACE.

THE following pages were originally written in detached thoughts, after the day's work was over, and without any idea of publishing them.

As they accumulated, an impression was felt, that probably they might lead to a consideration of truths about which the philosophic mind is not yet established.

The principal theories commented on, are: The eternal succession of worlds and planetary systems. The infinitude and eternity of matter. The infinitude and eternity of life and death; and, the infinitude and eternity of God.

The Rev. Wm. Buckland, D.D., in his treatise, vol. i. p. 17, says, "The days of the Mosaic Creation need not be understood to imply the same length of time which is now occupied by a single revolution of the globe, but successive periods, each of great extent." In Chambers' Encyclopædia, vol. iv. p. 699, it is stated, "The original, and as it is supposed, molten condition of the globe is hid in mystery and uncertainty." It is to solve these

questions by reasonable hypotheses, that these thoughts are offered. The Egyptian and Hindoo cosmogonies contained some references to these theories, but only so far as this world was concerned. A reasonable theory of the sources of the sun's light and heat is given. It does not appear to have been considered that the theory of the infinitude of the Deity involves the infinity of creation also; a reasonable hypothesis is given of this important study. A considerable portion of the work is devoted to those moral conditions and anomalies which exist in society. The thoughts on art are the result of my own experience, and it is hoped much will be found not usually contained in works on painting. The ideas and descriptions of the decline of the planet are what I conceive will be most consistent with the benevolence of the Creator. The thoughts are given as they were eliminated, either in the first, second, or third person. If I have added a little only to the ideal or practical knowledge of science I shall think my labours amply rewarded.

W. G. HERDMAN.

West Villa, St. Domingo Vale,
Everton, March 13th, 1869.

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THOUGHTS

ON

SPECULATIVE COSMOLOGY AND ART.

PART I.

CHAPTER I.

1. Origin of the Earth and Planetary System. 2. Eternity of Matter. 3. Time and Space. 4. Eternity of Change in Matter. 5. Analogies in Nature. 6. Infinitude and Eternity of the Deity. 7. Impressions of the Thoughts of the Deity on Matter.

1. In most treatises on Geology we read of the earth being originally in a state of fusion or incandescence*—what is now water being in a state of vapour, till, in process of time, each cooled down, one to igneous or hypogene rocks, the other to a universal ocean. But the question arises, whence came, or in what state were, the materials of this globe BEFORE they became nebulous, incandescent, in a state of fusion or vapour? Were they then for

* "The entire materials of the globe were in a fluid state—that the cause of this fluidity was heat"—Buckland, vol. 1, p. 39; "and one universal mass of incandescent elements formed the entire substance of the globe."—Ibid, page 56.

the first time created out of nothing? If so, were other planets also created out of nothing? Because, we must then attribute the same origin to all the starry systems of the heavens, which theory will inevitably lead us to a time when there was an infinite nothing, and we are reduced to the dilemma of asserting that this infinite nothing created something, or, that some superior being, or intelligence, at some particular period, created all systems of stars and worlds out of nothing.

If this last hypothesis be entertained, we are in this position, that, at whatever time the stars and their attendant planets were first created, however remote, so that the human mind cannot grasp or even form any conception of its durability, yet, that must be but a speck of time compared to the eternity that preceded it; and the question is this, had the intelligence which first created matter been in existence through all eternity, previous to its creations? Further, by analogous reasoning, we may presume, and indeed find it frequently stated, that, as there has been a beginning, so there will be an end. Are all stars and planets, and all matter, to be destroyed, consumed, annihilated; and is the great intelligence of nature to relapse into its original solitude, and remain so for ever, or have a period of repose, as stated in the Brahminic theory?*

It may be said that it is useless to speculate on

* "Thus, that immutable power, by waking and *reposing* alternately, revivifies and destroys in eternal succession this whole assemblage of locomotive and immovable creatures." "Ordinances of Menù." "Essays on the Philosophy of the Hindoos, by Mr. Colebrooke." See also Lyell's Principles on Eastern Cosmology, vol. 1, p. 6.

subjects we can never comprehend, or of which we can ascertain no satisfactory solution. But, the mind cannot or will not be bounded in its aspirations after knowledge, and thought will wing its way into the eternity of time and space, past and future; and, with regard to those speculations which we cannot ratify by any ascertainable facts, those theories will be true which the greatest amount of well-informed minds will in time assent to, after the most patient enquiry and investigation of the subject.

There is every reason to suppose that man, when he culminates to his greatest powers of mind, will for a period know everything relating to the past, and perhaps the future, of matter, in all its physical and mental developments of life and existencies, at least so far as our relations to this world, and its connections or influences with other planets and our magnificent centre are concerned.

2. No intelligent mind will for a moment conceive that there has been an intelligence of nature quiescent during all past eternity, and then, at even a remote geological period, bethought itself to create this world, and, of course, all the planetary system, and all suns and systems, and these to exist only a certain period, and the intelligence of nature to relapse into an eternal repose again. Such ideas can find no response in sound thought.

It is astonishing that any one can for a moment entertain the idea that a Deity only a few thousand years ago began to create this and other worlds, and that that great being had been in existence from all

eternity doing nothing; and, it cannot be entertained for a moment, that the Deity only came into existence at the same time as his creations. What produced them?

It is impossible to all thought of human intellect to even imagine a universal commencement of creation, or indeed of anything; because, there must have been an anterior something, either of Deity or matter, in a mollecular state of activity to create, which inevitably leads you to the eternity of both. Recede as you can, you still go back to the eternity of matter guided by mind, which we call God. Human powers of thought are incapable of conceiving the commencement of creation, or the origin of a God, or the powers of a God to create matter out of nothing.

Even in our own planet, all progress in geology, and thought on universal cosmology, keep throwing us further and further back into past ages in the history of our planetary system; and still further thought on the subject brings us to the conclusion, that what we call Deity must have been eternally employed It had no beginning. It ever was. If it had a beginning, there was nothing before it, which is untenable.

It is possible some minds may take refuge in a theory that all matter was originally in a state of vapour, spread universally over or through space; that a supreme power, some time in the eternal past, caused this vapour to assume the more dense form of water; that afterwards crystallization would ensue, which, by adhesion and denudation,

became rocks—which, by atmospheric and chemical changes, became other rocks. But this does not bring us one atom nearer the question, that the materials, whether in a state of vapour, crystallization, denudation, or otherwise, must have existed for ever, and that which we call Deity must have had an equal existence.

The questions that arise are: Whence came, how created, if ever created, or what was the original state of the materials of this earth—of all suns and planets, and other developments of the universe, as comets, meteors, &c.? What their extent? What is the ultimate object of the organic and inorganic creations we see around us?—for God, like man, has a purpose in view in HIS existence. What will be the final consummation and destination of the materials of which the universal systems of stars and planets are formed?

A few remarks on popular ideas may precede the consideration of these questions. It is a prevailing idea that this earth is to come to an end—be dissolved with all and everything on it. What then? Is there to be nothing more for all eternity? If there is to be another creation after us, may there not have been one or many before us? Why are we, in the vast eternal past, to be the first or only one? What grounds for the assertion that we are the first, or to be the last? What has been before us in eternity? What is to come after us?

With respect to the theory of a dissolution of the earth—of this and all planetary systems—it surely cannot be entertained that nature is to dis-

solve itself into oblivion and nothingness, and an eternal void to be the future. What inadequate ideas! Nature will be eternally at work with its principles of life—creation, durability, decay, death, and resuscitation—for the principles of life never leave matter, not even in death; they rise into living existence the moment death ensues.

If man could come again a million million years hence, he would find the great intelligence of nature still pursuing its benevolent designs, for it is an eternal principle, having no power to destroy its own existence, its wondrous creations, or cease its infinitude of work.*

Are the planets and the sun to decay and become annihilated? Is there to be no future creation? Are we to take the position of our system being the first to be created out of nothing,—

* Since writing the above, the following remarks in a Lecture by Dr. Letheby, M.A.. M.B., &c., will illustrate the words of the text:—"There are striking evidences of design in the way in which organic matter is constantly kept in motion; for, whether living or dead, it is always in a state of molecular activity, either advancing to a high state of organization, or retreating to the confines of the mineral kingdom. The result of this is, that, with a comparatively small amount of material, and with but little expenditure of force, the work of the living world is fully and effectively performed. Starting from the mineral kingdom, as carbonic acid, water, and ammonia—the elements of organic nature pass through a succession of changes, first in the vegetable, and next in the animal, until they reach the summit of organization, when they again return to their primitive condition. In this manner a *never-ending* round of change is perpetuated, and the same materials and the same forces are kept moving in the same continuous circle. It is not difficult to trace the phenomena of vitality to the cosmical forces which the plant first imprisons. It is easy to connect, by a correlation of force, the muscular movements of the animal body, and even the highest efforts of the human mind with the sunbeam which the plant had arrested."

going back to nothing,—and then a future system to be again created out of nothing? All these are untenable hypotheses, which time and thought will dispel from the human mind. Nature allows of no breaks of this kind in its progress. It is continuous—ever-changing, but ever-producing. Ever in the eternal past, and ever in the eternal future, has and will life imbue matter, whether in infancy of worlds, their passing existence, or what to us seems decay and death.

3. With regard to the foregoing questions, we may first state:—There are two self-evident truths, relative to time and space, which must necessarily be referred to; namely, there must have been an eternal past, and there will be an eternal future, independant of whether there have always been existences in the past, or are always to be in the future.

There is also an infinite space, which has been and will be forever; whether there has been, or is to be, anything to occupy it or not. All that can be seen by the most powerful telescopes, of stars and distant nebulæ, can but be a mite of infinite space, and can come under no definite operation of thought, as proportion or comparison.

There must be a limit to our powers of vision. That is to say:—even in an astral system of such vast magnitude as ours, which includes the milky way, some stars will be so distant, that scarcely a definite point of any appreciable magnitude, even by a telescope, will be impinged on the retina: and it must be borne in mind that the rotundity of the earth gives us command of the infinitude of space,

if we had any instruments of vision to penetrate it, which we have not, nor is it possible ever to have. If we can penetrate beyond our astral system, to other astral systems, we may safely conclude they are infinite, never ending. If astral systems are thus filling the infinity of space, then the creating, supporting, governing intellegence must fill infinite space also, and must have been from all eternity, for it could not at any given time create itself. It is an eternal entity.

4. If asked how the matter was created which composes the materials of this world, and all other worlds and systems, we answer—matter never was created—it always was, and always will be. It is eternal. I understand the act of creation to be the making of something out of nothing, which is an impossibility. It is not a principle of nature to make something out of nothing. Matter undergoes continual chemical changes, and its indestructability is well known to chemists, but there never was an atom less than there is, and there will never be an atom more. If ever there had been a time when there was nothing, there would have been nothing still. You cannot make nothing into the author of this vast creation of all the universe of never-ending matter in suns and systems, for you must also make nothing the creator of the Deity also, which is untenable. Therefore it has been from all eternity.

Could we follow the everlasting changes of matter in its atomic state, we should find the same atoms now forming the nervous system and mind of

man, directing and governing his intelligence and actions, now waving with the wind's motion in the density and depth of forest life, now winging its way in lone regions of aerial solitudes over vast sandy deserts, now growing into waving corn or gently breeze shaken grass on the meadow side, that again being consumed by animals, which again enter into the component parts of man, so that it would be a difficult problem to prove the negative, that a man does not in the course of a life consume himself.

All nature, organic and inorganic, shews progression: therefore a beginning. So does man; he is born, therefore his life has a beginning: he progresses, arrives at maturity, decays, dies; but he has neither taken away nor added one atom to the world's materials. He came from something which preceded him. So it is with the world and all systems. The materials of this earth, when in an incandescent state, or state of fusion, were not then being created. They were only in a state of transition. The same materials had previously existed from all eternity. Matter never dies. Eternal life is in every atom of it, though it may undergo eternal change.

The same principle holds good with life as with matter. If throughout creation all life should cease, it would cease for ever. As with matter, it is impossible nothing could create something, so it is impossible, there being universal death, that death could create life. Therefore life has been eternal. It is an eternal principle. There can be

no other hypothesis than the eternity of life, except it be said an eternal intelligence created life at some period of past time, if so; then that intelligence had existed previously to its creation, which leads you to the hypothesis that it eternally existed previous to its creation, which is untenable.*

5. There is either a limit to the modes and powers of creation, or the modes adopted have been seen by an all-wise intelligence to be the best. There seems to be a linked chain of analogies running through nature from which it probably never departs, perhaps cannot. All plants and animals came from parents. They are born, grow, arrive at maturity, decay and die. It is so with worlds and systems. They come from worlds and systems which have preceded them in the immensity of past time; they progress, arrive at maturity, decay, dissolve, have a period of quiet or repose, and recommence. That is the history of our earth's materials. It is probably now many millions of years old, but that in no way affects the argument. It came from materials which had for ever existed, but which had in the eternal past gone everlastingly through the same changes as planets, of commence-

* When I state that if life should cease, it would cease for ever, I mean, if the principle of life left matter. As nature at present exists, if all life was swept away from the earth, nature would begin again, probably in the same mode in which it first began, and progress as it commenced, till it finished with man. The evidences of this may be seen any day, by rocks being cut into—and new stones being exposed to the atmosphere—which soon begins to cover them with the primitive forms of vegetable life.

ment, progress, and decay, which we are now enduring.*

The matter of which this world is composed may have commenced in a gaseous state, but that was only the consumed matter of a world that had preceded it. Nothing was then created. Nothing was ever created.† It went through its destined revolution at its appointed time. It is progressing to it now.

From geological researches, and from analogies in nature, it cannot be doubted that the earth has its appointed time to exist as a moving, producing, living planet. The natural life of man is a hundred years. Every individual of sound constitution, having plenty of exercise in pure air, and good wholesome food, would live to this age. It is the extent of the fiat of nature. Just in the same way, the earth and the planetary system have their destined time to exist. It may be ten or a hundred millions of years, but that is only a speck of an eternity of time. Taking this view of the astral system, and seeing the number of beings on this earth who pass away singly, in death, as time progresses, so we may expect individual extinctions of planetary systems amongst the numerous family of stars which compose our nightly companions in the heavens. There will be no general destruction of the heavenly bodies. A solitary star, including

* It has been said this world is a wreck of a former world. The answer to this is, Is a son a wreck of his father?

† When I say nothing was ever created, I do not say nothing was ever formed.

its planets (of which latter we have as yet no powers of observation), will disappear, as is known to be the case. One of the Pleiades* for instance. But it will reappear. If we could come again in a million years, which may be the period of its repose, we should see the same star again, in the same place, commencing its career of existence in light, life, and happiness.

6. An immaterial, exclusive, isolated Deity, separate from matter, is inconceivable, but may be. It is difficult to disconnect the two. An intelligence in nature requires action, whereby to exercise its functions; otherwise it is a negation, non-existent. If it requires the material universe for action, it has always required it; therefore, matter is co-existent with its intelligence, therefore eternal. If that intelligence is infinite in extent, then is the material universe infinite in extent also, for one cannot exist without the other. The mind rejects the notion that there is an intelligence infinite in extent, part only of which is employed. Reasoning by analogy is safe here; the mind or intelligence of man could not exist apart from his material system, nor his system without a governing, guiding principle. They are inseparable. It must be so with matter, it has its governing, guiding intelligence ever present within it.

This universal intelligence of nature is at present inconceivable to created beings. It is impossible a created being can form any conception of its Creator, any more than a watch can form

* Meropé.

any idea of a watchmaker. There *is* a great intelligence governing nature in its infinite extent; but the question is, whether that intelligence is inseperable from nature or distinct from it? *We* see only the results of its wisdom and power. We see the sun and the stars, the blue heavens and the glorious earth, the lovely flowers, and all forms of life, and are cognizant of an intelligent wisdom, forming, producing, governing everything; but we can penetrate no further. But this by no means implies that we shall never penetrate further.

7. The intelligence of nature propels, infuses itself into its creations. It cannot do otherwise. The painter, poet, sculptor, architect, engineer, &c., embodies, repeats himself in his conceptions and productions. So does the Deity. He seeks his own eternal happiness in his creations. It is a question whether he sees the beautiful external appearances and effects we live amongst, except through the eyes of his creatures. This is at present, however, quite beyond a created being's knowledge. At the same time, it is a subject of thought, whether the intelligence of the universe has any other means of expressing its nature than by its creations. Everything that is, is only the reflex, the impression of the thoughts and mind, most probably the very nature of God. We see in nature, in man, in animals, trees, flowers, the universal cosmology of all things, WHAT GOD'S IDEAS ARE of everything relating to form, texture, life, variety, colour, sound, magnitude, speed,

durability, production, eternal progression of change, physical power, beauty, sentiment, passion, love, and that strange mystery—evil. For this great Intelligence has had the arranging of all things in His own way: therefore we see His nature in His works, and by them we have access to His essence and infinite wisdom.

It may be argued that we thus bring the Deity down to a resemblance of man and his works; but Scripture says man was made in the image of God. Objections are stated thus: Can there be any intelligence, or any inherent spark of deity, in pebbles, rocks, or stones? And we answer and say, rocks, and their reduced, rounded portion, pebbles, have about the same relation to animate and mind-life on the earth, as the skeleton has to animal life; each is indispensable as a stable foundation of a high organization, and each may have about the same relative degree of utility in its place.

To illustrate the powers of sensation and communication of thought, ideas, and language, in which nature exercises such vast variety of powers through matter, we may say: beings without eyes (ocelli) have sensations of light. Dumb animals are only dumb to our ignorance and unacquaintance with their language and modes of social intercourse. They have powers of communication we know nothing of. Two cows will meet together, and looking at each other, without a sound, one will go and lick the other with its tongue. How is this information conveyed? Man has this power slightly, and woman more so, of conveying will, assent,

dissent, information, desire, or the contrary, by the eyes and the expression of the features. There is also an expression by touch, which is a mystery to our philosophy. If two of the opposite sexes who love each other—or even in common friendship in degree, of the same sex—touch each other with the naked hand, a communication and thrill as of a slight electric passage takes place between the individuals—which is absent or nullified by drapery or gloves interfering with the interchange of the subtle essence of life, which otherwise gives intense pleasure—though not a word is spoken.

To resume the thread of our argument—broken by the last digressions—we state: It is by His creations we know God; and as HE appears to progress in His developments of mind and matter, we may expect He will eventually reveal Himself in as much fulness, glory, knowledge, and power, as man will be capable of receiving, when he arrives at his utmost state of maturity, which he is a long way off yet.

CHAPTER II.

1. The Astral System. 2. Infinitude of Planetary Systems. 3. Astronomy and Perspective. 4. Source of the Sun's Heat and Light, and Incandescent State of the Centre of the Earth. 5. The Fauna and Flora, the Darwinian Theory. 6. Varieties of Life. 7. Change of Temperature of the Earth and its effects on Man. 8. Speculative Thoughts on Cosmogony.

1.—We have spoken of those analogies which appear to run through all life and nature. Matter attracts matter. As mankind assemble together in cities on earth, which are made up of smaller assemblies of families, so the stars and their planets assemble in great astral systems, which are made up of smaller planetary systems, having a head or centre each. Our astral system is the magnificent assemblage of stars, including the milky way, which we see around us nightly. According to astronomers, our planetary system is in but a poor or vacant suburb of this astral system, near the north edge of it.

Whether there is any central sun in this system of magnificent magnitude and grandeur, round which all our stars and planets move, or whether the whole astral system is moving in space, will be sometime ascertained. Our planetary system is said to be moving towards the constellation Hercules, which would seem to contradict the hypothesis that all were moving, because we then could not observe it.

2.—The question then arises, are the numerous nebulæ, visible in the immensity of space, distant astral systems containing as numerous a family of stars as ours, and separated from us by spaces beyond the reach of human thought to grasp? If so, we must, however incapable of conceiving the idea, press on in the immensity of our conceptions, and assert that infinite space is filled with astral systems like ours; and that life, worlds, suns, and systems never end, never cease. Could thought wing its way through all eternity, it would still and for-ever be in the centre of existing life—for that which is infinite, having no bounds, no termination, everywhere in it is its centre—seeing that its radii are eternally of equally infinite extent.

If it be said it is impossible to conceive an infinite, never ending space filled with suns, worlds, and life; we say it is equally impossible to conceive a small portion of infinite space, such as that occupied by our astral system, and then nothing but an eternity of nothingness beyond. If so, then God is not infinite. He is only a certain magnitude. We cannot imagine a useless intelligence of nature existing beyond its creations.

To put this in as clear a manner as possible, let us take our astral system, which I have said includes the milky way. Vast as this is, it is still only a certain magnitude. If creation is limited to this system, then the Deity is confined to it, and is that magnitude. There are but two hypotheses. Either a useless intelligence occupies all space beyond our system, which is untenable; or in-

finitude is filled with astral systems and life, with an ever-present God equal in extent to creation, (which is never ending,) which is the truth as it exists.

3.—It does not appear to be referred to or entertained by astronomers, how intimately all appearances, however distant in space, are governed by the science of perspective. We don't mean right-lined perspective, which refers only to buildings, and is confined to 60°, but circular, universal perspective, which embraces the whole circle of vision. The magnitudes of objects, their distance from each other, are governed precisely by their appearance to the eye from a given station. There is a relation between astronomy and perspective which invites the most careful attention.*

* I have seen statements made by men eminent in science, but who were evidently unacquainted with perspective, that if there had been a building the size of St. George's Hall on the moon, or a carpet the size of one of the London Squares, it could be seen. Allow me respectfully to say, that a building 100 times the size of St. George's Hall could not be seen, if, as I suppose, the fact is true, that the most powerful telescope we have, only sets us down at 240 miles from the moon.

The retina of the human eye is perhaps one of the most perfect organizations in created existence. Every object is depicted upon it strictly by the laws connected with magnitude and distance. It has nothing to do with atmosphere except it magnify the object, as for instance the moon at rising. Now, whoever made these statements, appears to have been ignorant of the rapidity with which objects lessen as they recede from vision, and the minute portion of the retina they occupy. The figures in perspective cannot be introduced into a work like this, but any one can convince himself of the truth of these remarks by a few figures of arithmetic. Placing a transparent plane before the eye, and about 12 inches from it, to get perfect single vision—a town a mile in length, at 20 miles distance, only occupies half an inch of space on the plane—what would it occupy at 240 miles off? A mountain 25 miles in length, and 30 miles distant from the eye, occupies about an inch and a half.

4.—The Sun is the great centre of heat and light for our planetary system. The question, therefore, arises, Whence does the Sun receive its materials for this light and heat? It may be stated that we are not aware of any chemical or physical operations going on here or elsewhere contrary to the ordinary laws of nature, save what may be allowed for the altered states of atmospheric influences in heat, &c., in more distant planets or their centre. It will be conceded, that heat and light can only be maintained by something combustible being consumed, and an atmosphere to be consumed in. There is no evidence that there is, or ever was, anything miraculous in nature. If we think so, it is our ignorance. More than the existence of nature at all—most intelligent minds reject a miracle.

Those who contend for the mass of the earth's materials below the granite, and to its centre being still in a state of incandescence, must show that the

If there was a city as large as London on the moon, it would not be seen as a city 240 miles off—a slight haze of grey mist might be discoverable—for the whole range of the mountains of the Lake District, occupying 50 miles of space, at 60 miles distance, only covers about two inches of the transparent plane.

The figure of a man cannot be seen by the naked eye 5 miles off. If a carpet 20 miles square was 240 miles from the eye, it would not be distinguished in the clearest atmosphere. The top of Cader-Idris is 6 miles from Dolgelley, but a human being cannot be seen on a clear day with the light behind; something indistinct, like a very small fly, may be seen, if it should move, but it could not be told it was a human figure by the naked eye. Colour has very little influence at that distance, and at 240 miles no influence whatever. It may be mentioned here that white is seen the furthest, red the next, and black and blue are speedily lost in the influence of the atmosphere.

materials are accessible to air, and how they can remain in an incandescent state without being consumed, or the addition or constant supply of fresh material for consumption.

The immensity of ages that have transpired in the formation of what is called the crust of the earth, renders it improbable that the great mass from beneath the granite to its centre is still in a state of fusion. All materials with which we are acquainted would have been consumed millions of years ago.

The fact of volcanoes vomiting forth their fiery lava, or other burning materials, is no proof that heat extends any further than just beneath the shell or crust of the earth, where the chemical nature of the materials may cause combustion by being within the influence of the oxygen of the external atmosphere.

There is this fact also to take into consideration. volcanoes are closing their operations all over the Planet; numbers of them are already closed; and when a progress goes on on this earth, it continues till its end is accomplished, so that time will see the extinction of all the volcanoes on the globe; then, what about our fiery incandescent centre? It is rare indeed that where a volcano closes it ever opens again. A question arises, on which we give no opinion, whether, when a volcano closes—if it could be kept open by artificial means—would not earthquakes in its vicinity be thereby avoided? Some curious statistics relative to this might be obtained.

So with regard to the Sun. It must have

materials for consumption, and a constant, never-ending supply. The received theory is, that the light and heat from the Sun is from an immense ocean of burning gas, of an intensity of heat of which we can form no conception on mere Planets, and that the great body of the Sun is within this ocean of light and heat. But this ocean of gas must have materials for consumption. Whence comes it?

I believe the Sun to receive all its material for light and heat from the Planets, and that by the decomposition after death of all life. That it is necessary for the existence of all the light and heat diffused through the planetary system, that death should continually be in operation on all Planets, the gases from which decay, of both Fauna and Flora, are immediately attracted through space to the Sun, and are there consumed for the benefit and maintenance of life on the Planets from whence it is received. There is not an insect that resigns its life on a decaying leaf, or a tiny flower that dies on the mountain side, but contributes its share to the centre of light.*

The same law is in operation to the depths of the ocean,—where life that decays and dies, the gases from that death rise and pass to their destined purpose. It was therefore necessary as one reason that the earth should revolve on its own axis daily,

* This is further elucidated by the fact that animals, including man, who die in the Arctic regions, do not decompose after death, at least for a long time, the Sun having no power there to draw away the gases which cause matter to adhere. Man has been found little altered thirteen years after death.

to expose every portion of it to the beneficial effects of the Sun attracting from it all its gaseous emanations from decay and death. This is probably one cause of the earth revolving on its own axis. It must be by natural power. We look on it calmly and with indifference as a thing accomplished in the ordinary course of nature, but some law of stupendous power regulates it. It can do no otherwise.

Put out the Sun and you destroy the great consumer of all the deleterious gases that are continually emanating through death from every Planet. Put out the Sun and all life would be suffocated in an instant. Blot out the Planets and the Sun would die of inanition. The Sun can no more exist without the Planets than the Planets without the Sun. Besides the death and decay of all life, there is a continuous stream or flood of gas proceeding from the body of the earth itself, which is no doubt a source of life and heat to the Sun, and which it is necessary should be evolved from it for the purity of the atmosphere and safety of the globe. On calm hot days on flat shores and heaths or mosses, this gas, on account of the larger emanations from such localities, can be seen, having a beautiful trembling motion as it arises.

There is nothing extravagant or untenable in this theory. There are dependencies in the physics of the system which are absolute. No portion of it, from the Sun to the most distant Planet can exist without the rest. Could you annihilate the most distant Planet in the system,

the whole would be disturbed, deranged, both Sun and Worlds; just as the amputation of a phalange of a finger in the human system would be felt with a thrill of agony in every nerve of the body—and the whole be ever after a mutilated system.

Death is the food of life. Life is the food of death. Neither life, light, nor heat, would exist without decay and death; therefore it is an eternal, and will be an abiding principle in nature. Herein will be one of the elements of the decay of the Planetary system. For when in its appointed time life shall gradually cease on the Planets, the Sun will wane in its brilliance, the external beauties and existencies of nature will pass away, the riches and grandeur of human thought will fall and decay like leaves in autumn, and the silent dying Earth perish in quiet death-breathing dissolution—the ultimate fate of all life and organizations of creation. For nature will never continue one atom more of either mind or physical force than is necessary for the attaining or upholding an object or end desired.

The history of the Fauna and Flora of the Earth will be a work of special interest and research for ages to come. There are incidents of a peculiar nature in this study which press on thought with an impulse which cannot be repressed. Why and whence all this multitude of life, in every conceivable, and we were about to say inconceivable variety of form—in Waters, Earth, and Air? How was life created? What is life? How

were the various genera and species manipulated with such infinite wisdom of means to an end? Has all life progressed from a monad to a man; or were the various genera created at once, as they have been found in a fossil state and as they now are? This branch of science is quite in its infancy. It is difficult to conceive any other theory than a progressive development of species. The difficulties of any other theory are so great that it only requires thought to find yourself in a labyrinth of impenetrable mist. Let us take the horse and mare for example. Now ask yourself this question, AND ANSWER IT. How do you think a horse and a mare came into existence? Were they created at once? If so, when, where, and how? If created at once, Nature had no need to create them foals, to grow—they would be created full grown. How was it done? Instantaneously? Nature need not have taken any time about it. Did Nature, at some particular time, foreseeing that man would find the horse a useful companion and help, make the pair rise out of the Earth,—full grown, a horse and a mare. Never. It is impossible any one can conceive how a horse and mare came except from a parent. The horse is a late production, one of those introductions we find preparatory to the advent of man.*

* Professor Agassiz, on this subject, writes thus:—"The distribution of animals cannot be the effect of external influences, but is the realization of a wisely-designed plan, by which each species of animal was originally created AT the place, and FOR the place which it inhabits. The only way to account, philosophically, for the distribution of animals, as we now find them, is to regard them as Autoch-

One of those mysteries (at present) that surround the gradual progress of life on the Earth is—that if it be denied that there has been a progressive development of the Fauna of this Planet, it must then be conceded that the Deity has been, and is constantly employed in manipulating new genera, and is so employed through the infinity of space; and we ask, when, where, or how, this was or is accomplished in times past or present? If a horse and mare were ever made at once and for the first time, there must have been a time, a place, and an immediate particular action of the Deity, relative to that individual creation, which is inconceivable; for it must be remembered we have evidence that the Fauna of this Planet were NOT created at once; and the world was in a very advanced state, probably some millions of years old, before the horse made its appearance on it. We are of opinion there never was, nor ever will be a single genera or species formed at once out of inorganic lifeless matter. All have progressed from anterior species, and are probably now progressing to future beings of still more advanced excellence, beauty, and usefulness.*

There are thoughts relative to distinct creations which will obtrude into the inquiring mind. The

thonoi—that is to say, as originating on the soil where they exist. There is not a single fact in favour of—indeed, all scientific observations are in direct opposition to the view that the whole animal world was created in one single centre."

* Take the Paleotherium, for instance, with its prolonged, overhanging snout and general form, which shews him at once to be the forerunner of the Elephant.

microscopic Mollusks, Polypi, Infusoria, and Foramanifera, shew a wisdom of formation which a great Intelligence could alone produce. Now, is it required that the whole infinite Intelligence of Nature, which is at work on the most distant stars, was occupied at a given time designing, and if I may be allowed the term, manufacturing, such minute creations; or was a part of the Intelligence of Nature only employed?* As the Deity never puts forth more strength than is necessary for a definite purpose, the latter would appear to be the more likely theory—which leads us to the hypothesis that the Intelligence of Nature is divisible, acting independently, though infinite in extent. This is a strong argument for the unity of the Intelligence of Nature with matter, otherwise you require the same Deity who is creating life in some star in the milky way, to know *there*, what is doing *here* on a microscopic Mollusk—which is an expenditure of infinite intelligence incompatible with its acknowledged attributes.

5.—The powers of Nature in life are amazing to comprehend. If there had been no life in the sea, and if no birds moved swiftly and gracefully in the air, we should have said how could life exist in water, and how could beings move otherwise than on the solid land? There appear no bounds to creative power and wisdom, and if we see such a variety of animals and floral existencies on this Planet, what varieties must there be on the other Planets of our system, where atmospheric and

chemical variations must cause corresponding changes in the Fauna and Flora; except we adopt the theory sometimes expounded, that violent storms may scatter seed out into space, which possibly may pass from Planet to Planet, but which theory we opine is very doubtful, scarcely possible, and does not effect the question how they were first created at all, and could only affect the Flora of the various Planets. Flowers are very choice and delicate in their abodes and climates, and ill bear moving to other countries than those in which they are indigenous, let alone being transplanted to other Planets where the climates would be either much hotter or colder.

6.—It has been stated that the Earth and Air are losing their temperature of heat. If this be true, then man and animals who are native in the tropics may die out. The negro will cease to exist, or be in the position to the more advanced races as the quadrumana may have been at one time to him. The higher forms of beauty and intellect will eventually cover the earth, and animals useless to man will disappear before him. The earth at present is only about one-third populated. Its powers of production of food are not one-thousandth part employed. Has the negro proceeded from an older stock than the Teutonic or Caucassian Race? It is dificult to conceive, and may well have been doubted or denied, that all the various races of the earth came from one pair. Egyptian sculpture of nearly 4000 years ago shews the negro to have

been then as now, but this is a mere trifle of time. If we had any evidence to shew us the negro and other tribes of 50,000 or 100,000 years ago, we should be nearer the truths we are seeking. If the negro 4000 years ago, being the same, is any argument at all, it is in favour of an older and distinct descent.

7.—As man has been on the earth but a short time (geologically) he will probably continue but a short time. The earth may exist millions of years after he has ceased to exist, as it has existed millions of years before he came. By analogous reasoning we should say—that a certain state of the heat or atmosphere of the earth's existence having produced animals of certain genera, should the earth relapse into the same state, the same species may again appear on the Planet. It is a well known axiom in natural history, that certain conditions of atmosphere, heat, and earth, produce certain organizations of life belonging to that condition. Is it only the flight of poetic imagery to say, that when man and his domesticated animals have long passed away from this Planet, the Graptolites will again float in similar deposits—and our long long lost friends, the Trilobites, again swarm in countless myriads in the ocean? Will the Saurians, the huge Labyrinthedon, and the mailed Glyptodon, again tread the earth or wallow in lacustrine deposits—will the gigantic Pterodactyles float in the air—and the beautiful Sigilaria and Calamites spread their graceful foliage by the river side? All are within the bounds of proba-

bility. Man obtains his second childhood, so will the earth. Reason and reflection assert, that as it came into being, so it will return to its primitive state, before it again enters into its incandescent, original state of fusion, preparatory to another cycle of existent life. Yes, thought conjures up and assents to the coming truth, that life with its loves, its labours, its passions and desires, its aspirations after knowledge and acquaintance with its God—its pleasures, pains, and death—its multitudes of ever surging destinies, will only culminate, to return to its original decay and departure from being. The earth will assume its long ages of silence and inanimate existence. Its moving multitudes will be but the dried up dust of the eternal past; and light, life, beauty, mind and soul, rest in quiet in that sunset of glory which may envelope in gorgeous gloom the final end of all things.

CHAPTER III.

1. The Primitive Rocks. 2. Time relating to Rock Formation. 3. Progression in Nature. 4. Mind and Creation. 5. Speculative Thoughts on other Planets and the Sun. 6. Compensation. 7. Other Planetary Systems. 8. Original Magnitude of the Earth. 9. Chemical Combinations of Matter similar through all Nature. 10. Magnitude of Animal Life in other Planets.

1.—The Geologist takes up his science at a very late period of the earth's existence, namely, at the formation of the Granite. Little is known of the Plutonic rocks beneath the Granite, such as Trap, Trachyte, &c. The composition of the Granite shews long ages of construction, when their component parts were distinct rocks. Is there a probability that the minute, but condensed parts of Granite, especially the Mica, are portions of the previous world to this, which either had escaped the general fusion of the earth, or had in its state of incandescence, and the long progress undergone in unknown periods of time of its circulation in its orbit, been ground down to their present mixed and mottled state. Their being the lowest general rocks, gives some foundation for the theory. They are portions of rocks which have evidently undergone the most tremendous crushing and grinding, separating, and conglomerating, that this planet shews. The stratified rocks shew their formation in evident tidal layers, but Granite puts all our

calculations at defiance as to how it was amalgamated in such minute particles as a foundation of the crust of the globe.

With respect to the Transition series, we have to account for their disintegration and deposition. We have to account also for the slow process of the forces that lifted the Granite to its present elevation in various parts of the Globe. If the rise of Mont Blanc to its present height is known to be a recent operation geologically, and if there be a probability of its attaining the altitude of Jewahir or Nevado de Illimani, what ages of time must be accounted for for the various lofty mountain ranges of the earth. We are yet unacquainted with the nature of the forces that have raised the most elevated mountains to their present altitude. There has been a purpose and a law of nature effecting these elevations, not required in planets more distant from the Sun, if it be, as stated, that Jupiter is altogether quite flat.

There is a feature of Geology yet to be considered which will open to the philosophic future an interesting field of enquiry. Leaving the Trap and Trachite rocks out of the question, let us look at a piece of Granite. These rocks, of which there is a great variety, seem in almost all instances to be composed of small particles of three substances, having more or less of one or the other, and in some instances one or two of the component parts are absent.

The first subject to be enquired into is—what are or were these minute parts of the Granite, so massive

and grand in their aggregate, as a selection, basement, or foundation of a great Planet? How came the particles to be so small to be used for such a tremendous purpose as the pillars of support for a world? Are they the rocks of a previous world crushed, but not melted or overcome by the incandescent state of transition? Man will and must know all things. Here are remains in a crushed or conglomerated state of certain rocks, differing in character from all others, which we call Quartz, Feldspar, and Mica. In what position to each other as separate bodies, were Quartz, Feldspar, and Mica, before they became in this mingled, united state which we call Granite?

The theory presents itself that these were rocks of vast extent, probably the very pillars of a former world, as the slates and sandstones are of this; for it must be borne in mind that as features and character in man as he succeeds his kind on earth are not an exact repetition of his progenitors, so the strata of this planet may not, and no necessity they should be, in the same order or layers of rocks, or even of their exact composition as a previous world. If Granite be composed of the crushed and conglomerated elements of a preceding planet, then in that rock alone we have the exact remains of the previous world. All other rocks being the result of after effects of denudation of water deposits in motion, and other disentegrating elements on the earth.

I never see a block of red sand-stone with a pebble in it, which some mason is chiselling for a

door step, but I run over in imagination the tens of thousands of years that intervened between that pebble being accidentally broken from some igneous rock, and its being eventually drifted down into and swallowed up in the ocean, where it has rolled about for more thousands of years, till it has got rounded to its present form, and then at length got embedded in the sandy accumulations at the bottom of the sea, which in time, again embracing some tens of thousands of years or more, probably a hundred thousand, has been lifted up by those internal forces we are so little acquainted with, and when brought to the surface has again lain long ages of time before man cut into the rock and found a pebble there.

I never see a block of Granite which some paviour is laying down at some street corner, but I think of the millions and millions of years that must have elapsed in its present state, and the convulsions, incandescence, and power that once surrounded it; and that it was probably a portion of a former living existent planet, but I reflect on the wonders of creation and the works of the Divine Mind which can bring two such distant periods into contiguity. It would seem that to God a million years is as a moment of time with us, for the Granite was formed in unknown lengths of past ages; and probably laid quiescent for incalculable periods of time till all the strata (or most of them) of the Earth were formed over it, and equally long ages of time must have elapsed before it was gradually forced through the superincumbent mass

so as to bring it into the view, influence, and utility of man; and long periods must again be added before man became acquainted with the implements which would cut and penetrate into so hard a substance. And yet we walk over it as a thing of daily life, without thought or gratitude to the Divine Being.

To proceed with the rocks, as now so truly and carefully given by the geologist, the question still arises:—Whence and from what materials came the super-strata of rocks above the Granite? The figure of the Planet must also come into the field of enquiry, because it is a question whether the Planet was not then and for millions of years after the formation of the Granite perfectly flat. Certainly all the stratified rocks must have been deposited when the Planet was in a flat state, with not a mountain upon it. Geologists have to inform us whence the materials came from, which compose the igneous rocks; after these the stratified rocks, though these are more evident in their own explanation, as also are the limestones, corals, and chalks.

There is no more remarkable phenomenon of this and probably all other planets, than their vastness, bulk, weight, quantities, and immensities of variety of materials, yet all without exception composed of, or are reducible to, the most minute particles.

2.—The further we extend our knowledge into the formation of the Globe, the more we are called

upon for immensity of time; for it is a question whether any of the operations of Nature ever went on any faster than they are now doing. There may have been local exceptions, the effects of volcanic eruptions, which do not affect the general question.

The Planet probably existed a million of years before any life appeared on it. We have to account for all time previous to the Silurian deposits. Long ages are required for the Gneiss, Hornblende, and other slates and conglomerates, when in the solitudes of past time the Earth rolled its day and night in lifeless silence; and the Sun had probably but little heat, having only supplies from the gases arising from the Earth's matter. No heat of the Sun would be expended uselessly, or before the Earth was ready to receive it, and animal and vegetable life required its presence. For no energy of Nature is put forth before it is wanted.

3.—Progression in Nature is analogous to life in individual creatures—as, for instance, Man. He cannot in his individualism *continue* to progress. Nature, like Man, will culminate to a certain degree of perfection, which will last a certain period, when a decay, or return to an original state, will set in. There cannot be an ever-progressing nature in either worlds, mind, form, or matter. It is like the hand of a clock, which beginning at one, from an hour which had preceded it, goes on its circle of an hour, and again commences. An hour ends, a period is accomplished, a distinct revolution designed by its maker is closed, but time never ceases.

It is so with Nature. You cannot entertain the idea of a clock, ever since time was, increasing its numerical indicators. So centuries, ages of time, periods of planetary systems, revolve their destined revolutions, and again commence that eternal circumference of life and being which, as it has been, will be, for all eternity. With regard to this progress of time, it can only belong to *our* finite thought. Every hour or minute that passes with us, appears to add an hour or minute to the past, and to be lessening some coming future, or bringing it nearer. This cannot be so with the Deity. Every moment to HIM must be the still same centre of eternal time; for that which has an eternal past, and ever an eternal future before it, every moment must be the centre of its existence, seeing that the two are eternally equal. This may require an effort of human thought; but an eternity of future can never be coming any nearer, and an eternity which is past is equal to that which is to come.

4.—How, or to what extent, mind will become intimate with creation and *its* mind, time alone will develop. The mind of Deity is fixed and absolute. It may be permanently isolated and distinct, or arise and be inseparable from its creations; but it ever remains the same transcendent, inconceivable, stupendous power, we see exemplified in its magnificent creations. But the mind and powers of man are not fixed, though they may be limited. We are therefore approaching the

mind of the Deity, and becoming more and more acquainted with His nature, laws, and physical powers, which we are applying to our own benefit and use. Aspirations for increased power and knowledge are now rapidly revealing themselves in the minds of men. *We* are *moving* in intelligence; the Deity cannot move in intelligence, because it is eternally supreme. An immaculate perfect power, to which no wisdom can be added, can neither have or require gradation, progression, or change.

5.—A question arises, whether the distribution of climates on our Planet gives us any clue to the state of the Flora and Fauna of Planets nearer to, or more distant from, the Sun. Is there any link of existencies here, that will lead, by parallelism, to ascertain the kind of existencies on other Planets, because a chain of reasoning will thereby be established which will bring us into closer relationship? The question may be put in this way:—The Flora and Fauna of the Planet in the Arctic regions may exist in an equality of temperature to the tropics of Mars; will the Flora and Fauna of the Tropics of Mars be similar to those of our Arctic regions? Will the same temperature produce the same animal and vegetable life? Before we assent to this, we must examine other known relations, which may not coincide with the theory; for if our Arctic regions are covered with snow, and they were equal in temperature with the Tropics of Mars, we might expect the equatorial region of Mars to be covered with snow, which is not the case; the

snow-line of the Arctic regions of Mars does not appear to extend further on the body of the Planet than it does on our earth. The theory is propounded on the supposition that the additional distance of the Planet Mars from the Sun will cause additional degrees of cold.

If the theory could be established, then the same animate and arborescent creations which prevail in our Tropics may be similar to what may exist on the Arctic regions of Venus.

Time and science will shew that there is no link in the chain of animated existencies wanting; and still further progression into the vista of futurity will shew a stream of unbroken life from the glorious beings on the body of the Sun to the poor, outside, starving vagrant, yclept Neptune—where no doubt as much happiness exists as the Planet is capable of.

It cannot for a moment be entertained that such an immense body as the Sun is uninhabited. Undoubtedly it is a source of multifarious life, as superior to us as we are to the Fauna of Neptune.

We may thus go step by step, from the highly-intelligent and splendid beings of the Sun, and its no doubt magnificent and gorgeous Flora, through every Planet, to the tiniest feeble animalcule on Neptune, which may scarcely know it has any life in it.

Nature gives immense differences in magnitudes of Planets; it may give the same proportions and varieties in their organizations. The Deity is ever equal and benevolent in the distribution of

His amenities. Life could not be any different from what it is here, on any other Planet; for a wise Intelligence was certain to create all forms of life best suitable for their destinies of climate, enjoyment, and utility.

6.—There is a principle of compensation pervading all Nature, equalizing the moral and physical universe, which opens a wide field of enquiry, not only to the student in anthropology, but in a large range of the sciences, including Theosophy and Æsthetics. The study of this principle enlarges our ideas of that sublime expression of the mind of God, which reveals itself not only in the beautiful in form, sound, and colour, but in the contemplation of physical compensations, which, by depressions or elevations of principles of happiness or misery, aims at a universal standard or medium, which cannot be very widely departed from without Nature interposing with a solace, a remedy, or a punishment. Our thoughts are thus opened to a knowledge of the principles which pervade the universe, and of a permeated universal happiness or equanimity in infinite life, so wide apart as that of Mercury and Neptune, our Sun, or the most distant Planetary system. The same government in mind and physics must be in operation in the most remote star of our astral system as here, for the Nature of God must be uniform.

Compare our highly civilized, but artificial, state of society, with the primitive, almost animal, life which existed in the early periods of man's

existence. The gatherings of the Nomadic Tribes of the Planet had their deprivations of the luxuries of modern civilization amply compensated for, by their wide dominion of liberty over the floral and animal world; their freedom of the possession of the earth's pasturage and its productions in cattle, and whatever of life contributed to man's support. Their advantages of reaching a patriarchal life, so pure and healthy, compared with the thronged, feverish anxieties and contaminations of modern cities, must have been a continued source of sound health, freedom from disease, virtuous felicity, and calm contemplative happiness, void of care, which we know nothing of.

7.—Transport yourself in thought to some distant Planet belonging to another Sun or system, the inhabitants of which will see our Sun in the Heavens as a twinkling star. They will probably be as well acquainted with astronomy and cosmology as we are, and be wondering what we are like in this system, or what is going on here. There may be myriads of stars, the systems and planets of which may be much further advanced in organic beauty of form, in science, in knowledge of their Creator, and in more blissful states of existence; for it cannot be maintained that all the Stars and their Planets were created at once, or at the same time as ours. Many of them will be older than us; therefore in a greater state of perfection in their beings, productions, powers of thought, and mental capacities, or be declining towards their period of decay,

while some may be much later formations than ours, probably yet without organic life.

If late discoveries in astronomy are to be relied on, there are Suns which have not yet become luminous. Dark, opaque Suns; their Planets not yet in a state of progress or life to supply their centre with the material for consumption in heat and life.

With respect to the kind of organizations on the other Planets, we are tolerably safe thus far. There are certain analogies governing all creation. There is light; it appears to be indispensable; there must therefore be organs of vision in infinite existencies, there must therefore be an organized being to have eyes, and we cannot imagine Nature to have made us much dissimilar from other Planets, and no right to suppose we are much inferior. Therefore organized beings something like the Fauna of our Earth exist through infinite space.

8.—There is a question which appears to have received little attention relative to the size of the Earth before the deposit of the various rocks. From the Granite in its original state of repose under all other strata, through the igneous and stratified rocks to the most recent tertiary deposits, it appears to have been that much added to the great bulk of the Earth's magnitude, and in many instances where the strata have been formed from crystalizations, or from organic life, as corals or shells, an additional weight also as well as magnitude must have ensued. Whence came these

additions to the magnitude of the Globe? Did the materials come from the inside by protrusion? How will this coincide with increased gravity to the centre of the Earth? Was the Planet once as much smaller as the depths of its deposits in rock indicates? Is the central portion beneath the Granite as much hollower as the amount of the external deposits? Is Gneiss the result of the denudation of Granite, Hornblende of Gneiss, and so on through the argillaceous beds, to the purely stratified rocks? Under any circumstances we must come to the conclusion that the bulk of the Earth has increased in magnitude, by the depth of its deposits, though there may have been no increase in the quantity of its original matter.

England is being now wasted away by denudation. It is only a matter of time when the sea will once more roll over it, and bury its cities, its lives, its loves, its treasures, its beauties, its ages of organic creations in the depths of the ocean,* there to remain till some future changes of the Earth's surface raise it once more to the wonder of beings who may then be existing on this ever-changing Planet.

9.—It does not appear, from the latest experiments on the material composition of the Sun, Planets, and Stars, that they are formed of any materials different from this Earth. If infinitude of creations shewed or produced infinitude of variety

* Numerous instances could be given of the certainty of this, which in a sketch like this cannot be entered into.

in chemical or natural properties, we might have a vast field of experimental philosophy before us; but here there appears a limit to the inorganic properties of matter. We have no evidence to consider the materials to be any different in all planetary systems from what they are here.

10.—A thought has often arisen, whether there is any corresponding proportion with regard to the size of organic beings, with the size of Planets. If there be such proportion through the various Planets, what must be the magnitude of the Fauna and Flora of Jupiter? What tiny Fairies on the Planetoids, where the largest being would probably be the size of a bee? We are so accustomed to our proportions on this Planet, that we do not imagine the magnitudes of organic life to be any different elswhere; but the slightest attention to the subject will convince us that this must be the case. There could not be beings the magnitude of our Fauna on a Planetoid, the circumferate superficial surface of which is not more than the county of Lancashire; and we should be mere insects on such a Planet as Jupiter. It is very likely the Fauna and Flora of Mars and Venus may be similar in magnitude to ours, and probably in organic form, subject to their varied atmospheres and distance from the Sun.

CHAPTER IV.

1. Periods of Repose in Nature. 2. Expression of the Mind of Deity. 3. The Planets. 4. Animal Life. 5. Minute Creations of Nature. 6. Personality of the Deity. 7. The Poetry of Sound.

1.—If man is made after the image of God, the Hindoo theory of the principle of the repose of Deity, called in Scripture, "and He rested," may attract our attention. The system, with its Planets and organic life, with the laws and powers necessary to sustain them, being set in motion to last a certain period, a repose may ensue. No creative powers will be continued in operation but what are required. Creating powers, and sustaining or continuing powers, may be two very distinct attributes. A clock being made by the skill of its maker, it is wound up to go a certain time, and goes. Its maker takes no further trouble about it. He sends it on its mission to do what it was made to do. He has confidence in the excellence of his workmanship. He is not continually making new wheels, levers, and springs, for that would argue imperfect work, or bad materials. There may be periods of alterations or renovations, such as Geology reveals to us; the taking away of old organizations and the introduction of new; but there are long periods of repose, when only the ordinary operations of Nature are in progress. A question arises: Was there ever a period, or have there been many periods, when

all organic life has been swept away from the face of the Earth, and new orders commenced of progressed or improved species?

2.—There is a continual mind of Deity floating or wandering about, over, and around human intellect, waiting for expression. Those who avail themselves of these silent whisperings of Nature, and attend to her dictations, become the great minds or discoverers of principles and inventions. Those who neglect them suffer the consequences of their indifference, for Nature does not again repeat her solicitations to any man or nation. She requires imperative, immediate attention. Is she to postpone her intentions of human progress—as, for instance, in Steam and Electricity—on account of man's idleness? If she does not meet with a diligent interpreter of her wishes, she carries her favours to others. Man should attend to quiet thoughts and intimations. He will rarely be impelled by strong impressions. A suggestion will open a vista, but it has to be travelled step by step, obstacles to be removed, the road itself to be made before a goal has to be reached which will realize a principle. Nature never mocks, tantalizes, or greeds her rewards. Quite the contrary. She is most munificent in her payments. Follow her up, be diligent, listen to her quiet instructions, grasp firmly her capabilities, and the results may surpass all human calculations, in power, in honour, in wealth, in progressive intellect, in utility, in enjoyment, and in the general advance of the human race in

happiness. Nature bursts with no sun of light on any mind. She first silently and quietly dawns in twilight, from a previous night of ignorance. If attention is drawn to that twilight by nations or individuals, the light becomes stronger, brighter—the dawn begins to display wonders before unseen—followed up, bright lights, that is, thoughts, the outriders of some sublime revelation, burst into brilliant power; till the glorious Sun, the great principle sought, reveals itself in all its glory and utility. Neglect this dawn, and a cloudy darkness may ensue, and all be deferred to another day—that is, to other minds.

3.—The grandeur of the Planets moving majestically in their spheres, while the Stars are to us eternally the same, is a magnificent sight to man. As I gaze into the wonders of a brilliant night, I seem to see, even with the naked eye, incalculable distances between Star and Star; palpable nearness of one, and immeasurable space to another. But what about these spaces? There are the Stars, Castor and Pollux, in the constellation Gemini; beside each is a small star, one to the right, one under—what immensity of space exists between the two. Oh! infinitude, what grasp of thought can compass thee! Would that I were allowed eternally to move in the immensity of Creation; but I fear sometimes, and it is a dreadful thought, that Nature gives no further invitation into her wondrous dominions than that which life gives in this diminutive action of a feeble existence. I

want to see Saturn and his mysterious, wondrous rings, so different and novel from the usual arrangements of Planets. I want to see the body of the Sun, and what brilliant existencies, what glories of created beings live there. I want to see what can be the state of light, heat, and life, on Neptune. I want to sail majestically through space, on some dreamy, visionary comet; or fly with angel's wings on some burning fiery meteor!—but I see no hope of my aspirations being gratified. After death, oh! let me wander eternally through the Planetary Systems of the vast universe, the never-ending Creations of God, moving from star to star, and their revolving attendants, gazing on their ever-varied beauties. This would be an eternity worth an immortal soul's existence. It would be worth creation's powers to produce beings with elasticity and immortality of life to proceed for ever through the vastness of created existencies. Alas, I fear there is no path of hope. Life and eternity are not created for idle wonder and enjoyment. No life or powers, natural or spiritual, are given by God without exacting records in work, or in registers of thoughts, or gifts.

4.—In an essay on Speculative Cosmology, which embraces all phases of existence, we may state, that one of the most singular phenomenon of organic existence is this preying upon and destroying each other, which is confined to the Fauna; the Flora being exempt from this strange anomaly. Questions have been put as to the benevolence of

the Deity which could create such a state of constant carnage, bloodshed, fear, and warfare, that exists almost without exception through all animal life. There is scarcely an organization on Earth but is liable to be destroyed and consumed by its fellow organizations. Even now, at this advanced period of this Planet's existence, its most finished organization, man, has not ceased to prey upon his fellow man, shewing a depth of natural depravity or degradation almost unique in its enormity, for few animals prey upon their own species. That this state of things was made by intention is evident from the armament in one way or other of almost all organizations. Some by horns, some by their skins, as the Pachydermata, some by teeth, some by speed, some by cunning, some by the most novel contrivances, as by stink and ink-bags; some are not only armed with spear or sword-like instruments, but they are toothed like a saw, apparently for the mere sake of torturing. Let us examine this by analogies. Before doing this it should be noticed that many of these weapons and contrivances are more for defence than prey, or destruction, as for instance, the horns of the Herbivari, the mailed coverings of the Tortoise, Armadillo, Rhinoceros, &c., the speed of the Horse and Deer, and contrivances of various fishes. All these appear to have received a separate and benevolent consideration of an all-wise Deity, attentive to individual life; and to give an equanimity in the dispensations of Nature in preservation and reasonable security.

The analogies referred to may have a similar construction, to infant states of society, and the early years of man's individual existence. All history is stained with the crimes, tortures, and martyrdoms of societies in a beginning or progressive state, religion itself being as fertile and replete with cruelties as any other sources, as its early history shews. In time mankind grow out of this, and a more ameliorated condition ensues. It is so with the individual man. Boys are proverbially cruel. It is not till he attains the age of manhood that higher and better feelings pervade, and at about from 50 to 60 years he assumes his greatest benevolence, and comes nearest to the spirit and essence of his Maker.

This will be so in the histories of nations and man's duration on the Earth. The early states of cruelty will pass away. Man will attain to his highest state of perfection in benevolence and kindness to animate life. It will affect the inferior organizations also. The more rapacious natures will die out. They have done so far; and the Earth assume a more peaceful, tranquil, and less destructive state. Nations who go to war are only in an inferior animal state. The time will come when mankind will wonder what sort of people they were who invented machines to destroy each other, and who carried them about with them to take away each other's lives, and meet in tens of thousands to maim and murder each other. War is the remnant of animal life bequeathed to Man in his progress from the inferior beings.

5.—What astonishes our imperfect conceptions of an eternal Godhead is, that, that being who must be present in all the infinitude of space, with a greatness and grandeur of power of which human thought can have no conception, should at one time have had its particular creative thought employed in the construction of such apparently unimportant objects as the more minute Mollusks, but so it is. It leads one into strange ideas of the particular nature of Deity at the moment of such creation. They must all have been created for a purpose, and have an end to fulfil in the universe of life.

6.—Up to the present time there appear to have been singular notions amongst all sects, creeds, nations, and individuals, about a personal Deity: as though it was an individual. We cannot get out of our own personalities, and must forsooth make our God simply a magnificent self. All reading, research, histories, creeds, beliefs, even to sculptures, paintings, and adorative symbols, as of the Egyptian, Persian, Hindoo,* and Grecian theologies, and Cosmo's, all culminate in personalities. Volumes might be written on this strange bias of the human mind.

Through the Babylonian and Assyrian sculptures, through all civilizations and savages to our own time, all illustrate this hallucination of mankind, the determination of Deity into form; sometimes the most insignificent and ridiculous imagin-

* Except the Bhuddists.

able. This is only a wandering infant state of mind. Nothing impresses us more than this strange individualism of man's God. It is one of the most remarkable truths of history, even to this date, that man's God seems different to nature's God. Man asserts one thing with regard to the beginning, progress, extent, purpose, and being of God and His works, whilst at the same time God appears to be in action in laws, in creations, in continuance in or of operations, in an eternity, and infinitude of existencies, which appear to have little in common with man's ideas, creeds, or beliefs. Man's ideas are only what you might expect from such a feeble creation on a small Planet in a suburban system like ours. The Deity's grandeur of governance and progression is a power and mystery yet unknown to us. Perhaps will be for ever. I have no desire, and do not intend to get into any antagonism or controversy relative to man's ideas of a God; or with His personal interference in our domestic concerns on a small Planet like this. They are, as ideas, similar to the development of progressive life on Earth. They are the alphabet of thought. All these infantile delusions will be dispelled like morning mists, that in early dawn dim the glorious light that awaits the rising sun of mind now rapidly bursting its rays of truth on mankind. God is not a being. HE is a principle. You might as well call electricity a being. Man is a being, but he has a governing guiding principle within him, an intelligence that makes and keeps him what he is. So all matter,

all worlds, suns, and systems, have a governing, guiding, creating intelligence within them which we call God. If, then, the Deity be a principle, it proves His omnipresence. This ever present principle has a power, a wisdom, a benevolence, a majesty, and goodness, created beings can have no conception of. What a motive therefore for purity of thought and action, when it is known a present God of such greatness and goodness is by you, cognizant of your every action, and to whom sin must give pain, as holiness of life will give pleasure.

7.—What nature's gifts in the poetry of sound, and in the dreamy visions of art, and the power of ideas in language will attain to, it is impossible to say. When will thousands of human beings assemble on the mountain side, and in well-trained, sublimely expressed voices, tremulously, and with soul-impressed harmonies, thrill the passing air with the tender, the grand, and the beautiful; and with the mind-power of sound, lift the human heart to the Godhead, who, for anything we know, may be floating over them, enveloping them like a golden sunset cloud; shall I say listening in *His* way to the glories of His own creations in the songs of nations, and brooding its entranced impassioned mind as the quivering notes ascend into space with all that sublimity of genius given to man by his Maker. Of all the gifts which in the plenitude of its benevolence God showers into the human heart, nothing arouses with such energy, or envelopes the soul with such spiritual mystery and power as

music. It does not require the dreamy, trembling, full souled, thrilling harmonies of Beethhoven, which seem as though the zephyrs on mountain sides, amongst trickling rivulets and softly shaken grasses, had dotted their sweetest dew-lit harmonies for the listening soul, or the tender breathings of the immortal Mozart who seemed familiar with the very strains of Heaven, to arouse the soul to enthusiasm. Simple popular melodies, the efforts of unknown genius, rouse the love of country and kin to an almost painful excitement, and the national airs of Scotland and Switzerland have a power over the soul no science can equal for its intensity.

PART II.

CHAPTER V.—PAINTING.

1. Introduction. 2. Landscape Painting. 3. Expression of the Mind of Deity in External Nature. 4. Realistic Painting. 5. Turner. 6. Expression of Mind. 7. Sculpture. 8. The Artist Expresses Himself.

1.—The art of Painting is one of the most singular gifts of the Deity to man. Imitation of form seems to have been the forerunner even of written language, and thus was the foundation of communication of ideas in the earliest dawn of civilization. Symbolical representation was immediately followed by Sculpture, if it was not contemporary with it. Whether Greek art was of Persian, Assyrian, or according to M. F. Lenormand, of Asiatic origin; we must date art, and high art too, long anterior to its dawn and perfection in Greece. We have only to look at Layard's magnificent work on the Assyrian Sculptures, to convince us of the chaste and severe drawing of ancient Sculpture, and its high imaginative power.

As this portion of the work is to be of a practical character, it will not be necessary to enter further into the history of art, which has already been ably done.

I must however remark, that Landscape Painting evidently commenced in the back grounds of Figure

Painting. In such early masters as Sandro-Botticelli and Cranach (about 1470); and later, in the works of Hans Holbein, we find landscape backgrounds of real artistic merit and good aerial perspective.

The progress went on till an almost equal mixture of figure and landscape, as far as good art in both departments took place, till gradually the figures dwindled in size, and the landscape became the principal; as in the works of Poussin and others.

Painting is a more difficult and advanced art than Sculpture. In the latter, the veritable round of the figure is given, but in Painting, this round of the figure has to appear as veritable on a flat surface.

Sculpture is narrowed almost exclusively to the human figure, and in its widest range is confined to animal or a few floral forms. Painting embraces every effect of reality, of the poetry of form and effects, in imaginings of the scenery of the Earth's surface under all its wonderful changes and ever varying daily beauties. All histories of nations, of dynasties, of assemblies, of individuals, whatever of sight, of thought, of idealities, or conceptions of things unknown, occur to the human mind; all are legitimate subjects for the Painter's pencil, and all contribute their quota to the sum of earthly enjoyment provided for the intellect of man on this Planet.

2.—The early Landscape Painters, such as the Caracci, Albani, Claude Lorraine, and Poussin, arranged or made their Pictures in harmony with

the highest principles of art, but still not exclusively from nature; they were combinations or compositions, probably from recollections. Claude Lorraine rarely painted realities. Poussin, Wilson, and only occasionally Turner, gave us veritable scenes from nature. They culled the Earth's most classical and poetic beauties, and storing them in their minds, or sketches, reproduced them in those sublime works of human genius which have never been excelled by the grandest picture ever taken from nature as a bona-fide view. It is from the Dutch school we receive the first actual studies from particular local views. They went into the other extreme, and without much generalization, gave us every brick and stone in a building, carefully made out. Of this class were the two Van-de-Veldes, Van Goyen, Van-der-Meer, Hobbima, Ruysdael, Paul Potter, Pierre Molyn, Jean Wynants, Albert Cuyp, and others.

From this niggling minutiæ, landscape Painting has long emancipated itself. Instead of being a laboured representation of external textures of natural and artificial objects, it has become one of the most exalted and spiritual exponents of the mind of God and man that the human intellect is capable of. The most subtle and refined mysteries of nature are now attempted with success, and it is difficult to foresee any boundary to the highly poetic and imaginative beauties that lie before the landscape Painter's contemplation, if he will only follow the master mind, the intelligence, that will ever imbue with thought, grandeur, and loveliness,

the infinitude of effects that will rise daily with the Sun, and never cease while earth and its glorious luminary last.

3.—The mind of Deity, as expressed in external nature, is amongst the most mysterious and absorbing wonders the soul of man can contemplate.

This is accomplished by forms, colours, and effects. We see the Sun descending to the horizon, tinging mountain sides with rich glows of varied hues, touching hoary sombre woods with tips of gold, drooping in gorgeous colours on waves and shores, behind semi-transparent mists which seem the embodiment of strange heavenly dreams; soon atmospheric grays and thin vapours cover the rich vermilion wanderings of air, till the most indescribable phantom-like gleams, which seem impenetrable to human vision; minglings of earth, and air, and heaven, spread over the skies and change with seen rapidity, as if nature was in a playful poetic dreamy mood, and dwelt momentarily in a fairy land of poetry of its own inimitable language.

If God is as superior to man in sentiment and poetic feeling, as He is in the grandeur of His power, and the magnificence of His creations, what vast incomprehensibility of thought rests in the eternal mind, never to be revealed to created beings. We can only receive the scintillations, the flickering rays of the stirring pulsations of the soul's aspirations, which proceed from the great luminary of thought centred in the Creation. All listenings of the sublime dreamy sentiment of music, which

seem to wing the mind away into and amongst illimitable spheres of imaginative sensations; all greatness of power in language, in poetry, which commands and rivets the soul in unison with the divinity as its own sublime expression between Heaven and man; all interpretation of the conceptions of the divine mind in painting and sculpture, exhibiting His own creations, the impression of His thoughts in His own works, giving to man's vision the Godhead's appeal to His creatures, in appearances of His atmospheric and natural effects and forms, which are God's painting and sculpture; all are the doings of the one great governing Intelligence of nature. If you see a magnificent sun-set spreading a glory of mysteries over a sea-girt shore, scattering its vermilion and purple tints over the vast concave sky, and reflecting their sublime grandeur on the wet wide shore. Who arranged in such delicious harmony the speckled beauties? Who sank the rich red tints into decaying darkness, till shade after shade closed its brightness into sombre, quiet hues, and again into gray neutral fading shadows, till solemn twilight seemed to pervade all nature in dreamy death-like sleep, and night reigned over shore and sea, and the wandering star-lost mind wondered where in the vastness of creation's loveliness its absolute locality was?

Sufficient thankfulness, adoration, and admiration, do not appear to be given to the great author of the magnificent effects we are daily surrounded with. Beauty of form, colour, and passing arrangements, which appear accidents, hang round us daily.

Not a day passes without its own peculiar beauties. God never rests, ceases, or repeats His efforts. It is a strange feeling, but true, that man does not seem to know, or care, what God is doing. He does not even seem to see or know, far less to appreciate what loveliness or beauty he is constantly surrounded with. A dreadfully depressing thought presents itself, that the divine mind seems daily and nightly employed in presenting in luxurious abundance all beauties of form in animated nature, all beauties of colour and effect in created variety, in swiftly passing clouds, in lovely pale blue evening sky, in which some brilliant planet gleams in twilight grandeur; again, in sweet greens of earth, and a wilderness of tints of rocks, and gently shaking foliage, changing their subdued colours as if for very satiety of enjoyment to man's vision; and yet, the only individual that all these glories seem to be created for, with few exceptions, have not the slightest feeling or regard for the sublimity of beauty the Deity surrounds us with daily. Alas! man only looks upon the earth and all it produces with a feeling of what he can make out of it, what profit he can wring from its treasures, and how little gratitude or reverence he can give in return. Will it always be so?

4.—The late introduction of what is called realistic painting, as expressed to me by an eminent landscape painter now deceased,* is but a low state of art. Its mission appears to be to represent matter

* J. D. Harding.

only in its varied forms and textures. Whilst advocating and representing truth, as its sole exponent of the visibles in nature, it forgets that deformity, depravity, distortion, drunkenness, all that is detestable, debased, dull, dark, and dangerous on earth is truth. One half of all that is true on earth is evil, bad; to be avoided as painful, ugly, and sinful, and these disagreeables are recorded as evidences of the value of truth only as a principle of art.*

There may be a certain amount of merit due to plodding patience, which sets some articles of virtu, drapery, antiquities, or natural objects before it, and after months and months of labour produces the most exact imitation the eye can see, and the hand delineate, but this is not art. No particle of thought invests the production, only sight. Even in their elaborate patience they were outdone by the monks of old, one of whom would spend 50 years over an illustrated missal.

Not content with chaining the intellect down to the material world, and banishing thought, soul, and sentiment from the canvas, they attempt to deride principles, those stable and legitimate laws of art, which have been the guide of all great painters of excellence, and which have met with universal adoption by all men of eminence in the world's history.

What can be expected in any walk in life without a guiding principle? Art should not be on such

* The subject of this passage was never better expressed than by the present President of the Royal Academy, Sir Francis Grant, who said, "Art without truth and truth without art, are equally worthless."

an insecure foundation; that a beautiful picture may be an accident, a thing stumbled upon, and unexpected. A clever Artist well grounded in principles never errs. His picture is perfect in his mind before a stroke is put on the canvas. He does not begin blindly wondering what will come; he paints with a certainty from knowledge, and a fulness of power and thought, which ensure success.

A true Painter does not wait gaping like a goose up to Heaven for inspiration. His fertile mind is so constantly storing beauties of effects and thoughts, that he only regrets that the slow operation of reducing them to pictures should allow so little of his observations and imaginings to be realized on the canvas. His mind is ever before his practice. His practice ought never to drive his thoughts into seeking for subjects or effects. He has an inexhaustible fund of these in store. An Artist lives in a world of his own. No being on Earth sees nature like he does. May I be allowed the antiphrasis when I say that the outside world when they look at nature do not see it. And a world of soul pleasure they lose by their indifference or inability. Day by day, and night after twilight, and early dawn, and noon-day brilliance, with its light and sharp shadowy vigour, and white rolling clouds, and thin fleecy vapours in far off air, and varied and majestic forms of trees, and flower decked meadows shining like the stars, and stony bubbling streams, and rocky steeps with green bits of vegetation here and there, and placid blue lakes lovely with inverted woods, and mountains rising

up to the blue sky in snowy whiteness, glittering in the shining sun, and flowing streams, glistening with light like silver, wandering through romantic glens, or by quaint old cities, reflecting their evening lights in the passing waters, and sombre evening with its deepening colours and mysterious shadows sinking into rich yellows, reds, and grays, till earth, and air, and heaven mingle in gloomy grandeur, impressing the soul with strange thoughts of indescribable uncertainties of lost and mingled realities dimly seen—all, all are the painter's riches. Nor is the artistic mind lost here. The crescent moon follows the twilight, and the evening star dips into the dark blue horizon, and myriads of lights spangle the heavens, and the dark wide shore and murmuring sea in the distance fill his soul with awe; that the mind of God should so benevolently be expressed in the changing wonders of daily vision, all of which are within the province of Art. He is the interpreter of the *seen* mind of God, in distinction from music and poetry, which dwell more in the inspirations of thought and imagination, though his powers have a wide range of visionary ideas and effects, so as to be equally able with the poet and musician to penetrate into the dreamy lands of thought, and bring the loftiest fancies of the poet to veritable vision on the canvas.

When will the gifted and sublime painter emerge from the trammels of sight work, into the work of thought and mind? Leaving the mere drudging copying of the visible, and gazing with his soul through his eyes, and not with his eyes only,

into the pervading spirit of God's nature, which envelopes creation with such infinite power and dreamy grandeur, endeavour to realize that spirit in his productions.

The Painter should open his soul to the fact that, to no efforts of Genius, whether of music, poetry, or form in architecture, or any other avenue of man's energies, does the Deity spread his glories so clearly, beautifully, or with such visible grandeur for his contemplation and imitation as He does to art. Again I say who paints the immitable loveliness of the sunset sky in the heavens, its mysteries of vermilions, blues, and yellows, now in glorious purity of colour, now in minglings of tint behind tint, transparency beyond transparency, revealing far off delicate hues in space which seem to penetrate to the distant stars. These again reflected in scarcely subdued tints on quiet seas, shores, or lakes in solitudes on Earth, where nought living but the red flamingo seem there to see.

5.—It is in external nature alone that God's poetry of thought is VISIBLE. Even the poet and musician must go there for inspiration. The painter's mission is to stamp on canvas the SEEN glories, mysteries, and beauties of the mind of God as spread over the mornings and evenings of earth, and which to this day Turner is the one solitary mind who has penetrated the furthest and the most successfully into the more refined beauties of the world and sky with which we are surrounded.

It is a singular thing that though most great

minds leave an impression on the peculiar art they brought to a higher standard than was previously occupied, so as to have either scholars, followers, or imitators, Turner has had none. On the contrary, with his decease arose the most startling reaction in an opposite direction, which has been seen in the past century. From the most dreamy efforts of genius in art, from the utmost indistinctness of touch in execution, from the most learned and commanding application of principles, from the most sublime poetry of thought and depth of sentiment, from the most boundless observation of natural effects, so that it has been said that nothing further was left for landscape painters to do, from the most susceptible penetration into the delicacies of aerial beauties, from the widest possible command of all subjects, of seas, of storms, of sunsets and morning lights, of drooping stars and the crescent moon, of teeming rain and the bow of promise, of classical scenes, of palaces, and terraces, and distances, of mountains, and streams, misty and afar off, of historic and mythologic subjects, of city scenes with their multitudes and ever varied effects, of coast scenes with their wild grandeur or calm repose, of almost every possible effect in nature, civilized, rural, or natural; no sooner had the sublime author of this accumulated greatness of accomplished art retired to his everlasting reward, than painters set to work to see how many heads of corn they could count and accurately paint in a corn-field, how many ivy leaves they could niggle on an old wall; how many tints they could imitate on a brick, and how straight and unlifelike

they could make the human figure, and how void of sentiment and atmospheric effect they could make nature appear, to the derision and melancholy thoughtfulness of the truly educated in art.

Those who do not understand Turner should remember that his powerful mind went through many changes; in fact, through every phase of thought and observation in landscape painting, till he came to the conclusion that painting from impressions produced the highest state of the poetry of art. A century may pass before another Turner dawns on the world of art, embraced in the wide sphere of effects the Heavens and the Earth offer to human sight.

6.—It is not alone in the glowing lights and colours of evening, in the solemnity of twilight gloom, in moonlight tenderness, in starlight magnificence, or morning mists, that the Godhead's thoughts are visible in seen effects. It is in the human soul breathed through the countenance of man and woman we look for all expression of love, of varied passions, of philosophic thought, of dignity, command, daring, and a thousand reflections of the soul's wanderings and passions through the features, which it is the province of art to realise on the canvas, and the player equally to realise on the stage. It is melancholy to see the English School of Art degenerating into laborious reality of mere flesh and blood, and forgeting the mind power of Sir Joshua, and the thoughtfulness of Lawrence, and still further leaving the sublime tenderness of

Guido or the youthful Giorgione, and aim only at how really a human head can be made to stare life-like from the picture, utterly forgetting there is either soul or thought within, which perhaps there is not, either in painter or sitter.

7.—Sculpture is a grandeur of Art unique and alone in its magnificence. With all its splendid powers and its beauties of form, it has still fallen far short of its capabilities in mind and expression. Whilst it has perhaps excelled painting in its perfection of imitation of the human form, it has fallen far short of its sister Art in expression of the mind of man or woman seen through the countenance. The face of the Venus de Medici is an unmeaning, inexpressive countenance, totally unworthy the beautiful figure that accompanies it. The Venus of Canova is still worse, its hard lifeless misrepresentation of the heavenly, soul-filled, passion-breathing face of woman is painful to look upon. Sculptors look too much to form and too little to expression. Their error through all time has been in giving us ideal faces, *their* ideas of what a face ought to be in *measured* proportions, whilst thousands of lovely faces beaming with glory from the illumined soul within, God's own moulding, would have cast into shade all the statues ever made by man.

8.—Both in Sculpture and Painting, a relation between the individual mind of the Artist and his works exists in an intimacy he has perhaps individually little conception of. It is in a great measure

governed by the state of society he has accidentally moved in, whether of Ancient Greece, Roman, or modern times. A high standard of cultivation leaves its impression on every work produced. A vulgar man will be a vulgar painter, no matter who he is. Refinement of person, manners, education, and the influences of good society, tell in an Artist's pictures. His works invariably assimilate to himself. They are the reflection of his being. A man of learning, dignity, self-respect, virtue, and high sentiment, paints with like attributes and accomplishments. To the thoughtful, observant, ardent student, nature reveals herself in a thousand ways. It is by self-thought comes originality. The infinitude of the mind of nature is evident by the ever varied interpretation it is capable of from every new mind that arises. Painters teach the world how to see nature. Their pictures are their published books; read them, and you will arise a wiser and a better man. Constant admiration of the beautiful works of God, draws the artistic mind into a high standard of moral excellence.

The most uneducated observer shares in this benefit, inasmuch as it is impossible that any harm can come to any mind by the contemplation of beautiful pictures. Every good picture that gets into a household does generation after generation of duty; in educating, improving, and gratifying the minds of the inmates. A look or examination of a good picture, however brief, is a lesson learned for the time being, which will have its effect through life. It is the constant looking upon, and being

amongst first-class works of Art that makes the good judge, the clever connoisseur, and accomplished amateur. It is astonishing what illiterate persons become judges of Art by being constantly amongst high-class pictures.*

* The Author has seen several instances of this, where common workmen having been employed year after year for a period of 20 years or more, in unpacking and hanging pictures, became such excellent judges, they might have been trusted to purchase out of any gallery in Europe.

CHAPTER VI.—PRINCIPLES.

1. On Principles. 2. Lights in a Picture. 3. Summary of Requisites in Principles. 4. Theory of Colour. 5. Principles Resumed. 6. Memory in Art. 7. Preconceived Ideas. 8. Observations on Nature. 9. Colouring of the Picture. 10. Indication in Art. 11. Nature's mode of Impressing Light.

There are certain laws called principles which govern Poetry and Music, and which should govern Painting also; but that it is about one of the wildest and untameable things in the universe of mind. In Music, the melody is the pure gift of genius, and is capable of representing every light and shadow of human feeling, thought, and expression; but this once written has no longer a flight or will of its own. Its harmonies are governed by fixed laws, however refined or mysterious in arrangement. So with poetry. The ideas are the poet's mind; fancy, history, observation or description, as they may be; but his thoughts however true, grand, or sublime, have to be subjected to laws of metre and rythm of the most strict observance.

Every aspirant on starting into art, sets up an Eldorado of his own, thinking to be an original interpreter of the mind of nature, never before discovered. In process of time he only finds himself travelling by the same paths which have led to eminence in all time, and fortunate if he finds them, and does not in his perversity despise the reminding sign-posts, placed at divergent corners by well trained Artists, and get lost in a wilderness.

Artists have been known to deride principles and laws of art, as unworthy the genius of art, and state that they could not be trammelled with restrictions which seemed to aim at making pictures by rule. Let us see the value of his resolution.

2.—An indiscriminate jumblement of lights and shades in a picture never produced a great work by any genius. The Artist would soon discover, first, that a principal light was required of more intense brilliance and breadth than the subordinate ones, which he would find also necessary. An Artist well learned in principles would know at once, that this principal light must never be in the centre of the picture; that the subordinate lights must neither be parallel to it, nor equidistant from it, horizontally or vertically; neither must they be parallel to any of the four margins of the picture. Any attempt to evade these requirements of the dispositions of the lights in a picture will only end in disappointment; the uninitiated beholder being equally pained with the well informed critic, simply because nature which implants its laws in degree in every mind, has been violated in its principles. The Artist who neglects them only wades through years of uncertainties, eccentricities, and failures, all of which he might have avoided by studying his grammar of art before he commenced a single picture. He will only arrive by a circuitous route at the goal he might have taken a short and sure road to.

3.—The question has often been asked, What

are principles? Many well educated persons are desirous of knowing more about art than mere names and a general admiration of well known works.

It may not be out of place in a general summary of mind matters, such as are contained in these papers, to enumerate a few indispensible requisites in a first-class picture.

All objects whatever, shewn in a picture, should have the amount of atmosphere between the eye and the object, as visible as atmosphere, in the picture as it is in nature. The English atmosphere has been the making of the English Artist. Objects seen dimly through a density of air are so fascinating, indistinct, and poetical, that the clearness of the foreign atmosphere leaves the Continental Artist far behind us in aerial effects.

What is called accident in a picture is one of the most valuable things an Artist can avail himself of, if he has the sense to let it alone, and not attempt to *improve* it, that is, ruin or spoil it. What does this passage mean? It means that an Artist in the course of the manipulation of his picture or drawing, accidentally, unintentionally, or without forethought, produces an effect, or touch, which his eye immediately detects as of great beauty and value. All that we can add to this is, LET IT ALONE.

Colour in shadow has no increase of colour. Supposing the colour in light is red, in shadow it is not redder. Colour in shadow is the shadow, which is pure gray, and the colour. This was so well known to our early painters, such as the first Varley, De Wint, Prout, Turner, and others, that

they put the shadows in first, leaving the lights white, and then putting the local colour over both lights and shadows, gave the true effect of nature. This was also attempted by many of our early painters in oil, the glazing of the colour over white and shadow, giving a most fascinating and true effect for the time being, till at length it became evident that all painting, where much of the vehicle is used (oil or varnish), becomes eventually a disagreable opaque brown, perfectly ruinous to the permanency of the picture.

Every object in nature is modified in its colour by the amount and density of the atmosphere that intervenes between it and the eye. The principle is the Perspective of colour, which is one of the most powerful handlings of materials the Artist commands.

There are certain truths and refinements which ought to guide the diligent observer of nature in colour, that will affect the picture materially for better or worse, according to the self education of the painter, by close attention to *truth as seen.* Some colours are much less affected by atmosphere than others, and a painter should know this, because other eyes than Artists are acquainted with the ordinary appearances of nature. Pure red or scarlet, and pure white, are seen the furthest through any atmosphere. Blue, black, and yellow, are soon absorbed or lost in air, especially the two first. All colours are seen the strongest when in contact with their complementary colour. This shews that the English and Austrian armies when

going into battle, go in the worst colours they could, for being marked out and distinctly seen at certain distances. The English red being the complementary colour to the green of the earth they are most likely to be surrounded with, every man will be seen the more distinctly at the greatest distance; and white being the furthest visible, is still worse. If armies went into action clothed in a gray-green all over, head or cap and all, they could not be distinguished till close to.

It will be necessary to go more minutely into this effect of atmosphere on colour, because it affects Art materially, and young Artists are apt to make strange errors in ignorance of what is truth in nature.

Let us take the two extremes of black and white as examples. Black does not get blacker, and white does not get whiter, by an accumulation of atmosphere between them and the eye. Black speedily becomes gray, and is soon indistinguishable; and white becomes yellow, and eventually pink, by receding into distance. The cause of this will be explained in the thoughts on the laws of colour, their contrasts, complementaries, and harmonies, which will follow.

This truth affects landscapes materially, especially where massive white clouds prevail, and recede towards the horizon. The nearest will be brilliant white, (though painters rarely put on pure white, it looks chalky). As these clouds recede, the light on them becomes warmer, and near the horizon assumes a pinkish hue, which harmonize sweetly with the pearly grays of their shadows.

We appear to be indebted to two causes for this lovely and useful gift of colour; namely, to atmospheric effects and chemical combinations. The laws of colour and form are as yet hidden from us. What causes all the infinite variety of leaves and flowers to assume the forms and colours they do? Some law governs them. They have no choice but to be what they are.

It has been stated that there is no colour in objects in darkness: that it is the introduction of light that causes the colour. If colour is the result of chemical combinations, and those combinations remain in the material in darkness, then this theory falls to the ground.*

Light is only the medium of making it visible to the human eye. It is different with colour in atmospheric effects, which is altogether dependant on light for its variations and existence; vapour, variety, and density having a great deal to do with it.

Strange thoughts come dropping into the mind relative to this singular and sublime gift of God to man; and not only to man, but to all animate life, to the wandering butterfly and bee, which are thus wisely directed to their means of existence. To man it is one never-ending source of delight. Beautiful is the green of the Earth, beautiful and delightful are the rich varieties of brilliant colours with which nature paints the lovely Flora of this

*It is found that life and the most brilliant colours exist at the deepest depth of ocean yet examined. The colours in these animals and shells cannot depend on light, it is the chemical combination.

Planet. Sweetly subdued and delicate are the tints of rocks and stones, and wooded hills, and stems of trees, and shores, and cliff-sides glittering in the Sun. And then, the utmost revelling of an apparent Deity's delight in gorgeous shells, birds, golden and silver-lit fishes, insects, brilliant shining metals, and in the glittering purity of the rainbow; in the setting Sun, with its wondrous curtains of the most daring grandeur the earth can exhibit, all testify to the value of this gift, and the benevolence of God, who gave this happiness for the enjoyment of His creatures; and who spreads in the morning mists of dawn all delicacies of coming light, and, in the glories of each passing day, tints the earth with all minglings of richest hues, sombreing the sky with depths of dark thunder clouds, and cutting it in twain with the awful brilliance of the fire of Heaven.

4.—There is a theory of colour extant respecting primitive and compound colours, their contrasts, harmonies, and complementaries; which, whilst containing some principles of truth, has error in its very foundation, which ought to be rectified. It is stated that there are three primitive colours; blue, red, and yellow. This is promulgated on the undoubted fact that these colours first, exist; secondly, cannot be divided into any other colours. Each in its intensity can be reduced to a paler state, but still nothing but blue, red, and yellow remain. On the mixture of any two of the three a phenomenon takes place of great value in the theory, namely,

three important additions are made to the list, blue being mixed with red produces purple. Blue with yellow produces green. Yellow with red produces orange. These secondary colours of purple, green, and orange, by being again mixed with each other, produce a tertiary list, which again produces valuable and additional colours, such as browns, drabs, slates, grays, pinks, and so on, to every gradation and delicacy of tint; every colour and shade of which the world can produce is obtainable from the mixtures of blue, red, and yellow.

Examination into the subject reveals the fact, that the theory has no further foundation in truth than that portion of it which relates to certain laws of optics relative to colours and their complementaries, which are well known and easily defined. Any one of these three primitive colours being exhibited to the eye for a short time, the optic nerve becomes satiated, tired, exhausted, or whatever other term may be employed in describing it, when it is found that the exhibition of a complementary colour is necessary to relieve the eye and cause it to assume its normal state of repose.

Now this complementary colour is invariably found to be composed of the mixture of the two remaining colours of the primitive one used. That is to say, that vision having been occupied looking at red, its complementary colour is the mixture of the two remaining primitive colours, blue and yellow, which is green. This principle is true through every gradation of tint. The value of it

in Art, in manufacture, in household upholstery, in dress, in everything in life in which colour is introduced, is universal, absolutely necessary, and can in no case be neglected or avoided without pain to the most inexperienced eye.

It has been stated that there is no such a thing as colour; it is an effect, not a substance. Let this pass for as much as it is worth. It is said, take vermilion as an example. It is sulphur and mercury, that it is a brilliant red is an effect, and so with every thing in nature; whatever colour it is, is the cause of certain chemical combinations, as in flowers, which we are as yet unacquainted with. But the theory of the primitive colours blue, red, and yellow, is an hypothesis and nothing more. All colour is resolvable into light and darkness, modified by the density or rarity of the recipient medium. Pure light is white. This light penetrating into, or being absorbed into a denser medium of atmosphere unmixed by darkness, produces a yellow tone, as seen in declining day and at sun-set. This density of atmosphere increasing, becomes orange, and finally red, which is the extreme or tether of the effect of light penetrating a dense atmosphere free from darkness. This light and its effects of pale yellow, deep yellow, orange, and red, is met by an opposite extreme of darkness, which is blue. The effect of this is best seen in late twilight, when all effect of light has ceased to have any power over the atmosphere. It descends from the dark blue of the zenith, less blue, grayer, down to the horizon to a pale blue gray.

But daily effects occur in which these two antagonistic mediums of light and its intensities, up to red, and darkness with its receding or reduced effects to pale gray, become mingled; when the following changes result invariably, as fixed laws of colour. An equal quantity of yellow light mingling with an equal quantity of blue shadow becomes green. A certain quantity of red light mixed with a weak quantity of darkness becomes pink. A stronger amount of red light mixed with a stronger quantity of shadow becomes crimson. A green being formed from equal quantities of yellow light and darkness, again mixed with red becomes brown; followed up to their utmost capabilities, it will be found that all colours of whatever purity, delicacy, brilliancy, or strength; are all resolvable into light and its densities of yellow and red; and darkness, which is blue, and reducible by pale light alone into gray, and their mixtures which produce all the secondary, tertiary, and every other tint or colour seen on this Planet. Therefore, a theory which propounds three primitive colours as a standard of the science of colour, which can be shewn to consist only of two, namely light and darkness; and the result of the mediums they are visible through, must give way to the more simple and truthful laws of nature. As a corollary to the theory, we may state that blue is blacker or darker than black; and it is ascertained in this way; blue is the darkness of nature, it is the pure blackness of nature mixed with the least possible amount of light, which nature seems incapable of with-

drawing altogether even from the darkest night. But black, as far as all theories, pigments, dyes, or any chemical combinations of black on earth are concerned, is made of the due mixture of the three colours blue, red, and yellow, so that the necessary introduction of the lighter colours of red and yellow to make black, causes it to be so far reduced in tone as to be a lighter or fainter colour than blue, which is the intensity of darkness without red or yellow. Any person can convince himself of this in a moment by rubbing some prussian blue in its utmost strength and applying it to paper, and then rubbing any black made of the three colours, or otherwise, and it will be seen the blue is a much darker colour than the black.

Knowledge thus increases the power an Artist has over either the lights or shadows of his picture. Not only will a more concentrated depth of tone be given to the intensity of a shadow, but placed in juxta-position with the principal light of a picture, a greater brilliance is produced by contrast with pure dark blue; just as yellow and light reds, soften, sweeten, or lead off lightly in gradation, the more powerful lights of a picture.

There are certain colours, which are more suitable than others for certain parts of a picture. Prussian blue is quite unfit for skies, and the grays made with it, are unfit for distance, and in fact it is unsuitable for grays. It is a very powerful colour, and overcomes the weakness of the reds and yellows, mixed with it to produce them. Grays require great delicacy and purity of tint, and

they have all to be made by mixtures, there being no pigments or colours made for Artists half so good as he can make them himself.

Pure gray is obtainable by mixing blue, red, and yellow, they each destroy the other, and become neutral. Grays made of these colours have this advantage, they can be modified, that is, made warmer grays, colder, that is, bluer grays, green grays, &c. Gray is also made from cobalt and light red, which is suitable for distance. Indigo and light red, or indigo and indian red, are suitable for cloudy skies, the grays of rocks, &c. Gray is also made from sepia and cobalt, or indigo, unsuitable for distance, but very useful for the local grays of rocks, stones, and buildings. It is of great importance to keep the gray on shaded sides of mountains, clouds, rocks, or buildings, pure, though in shadow; they should not look heavy, opaque, muddled, or stifled with colour; they should have a degree of transparency about them, delighting and fascinating the eye. This transparency is caused generally by reflection, for nature is never so dull, dark, or opaque in shadow, as not to receive reflected lights from anywhere.

5.—As a rule (there are exceptions), the extreme edges of a round object are never the darkest; when a round surface, such as a pillar, or globe, has an accidental back-ground of light, the edges will appear dark and sharp, well defined; but it is a question whether the rule is not paramount, and had better be observed in Art. As a rule also, colour

being equal, the shadow of any object is darker than the object which causes it. All shadows are darker and sharper the nearer they approach the object which causes them.

The green of the earth in its covering and floral exhibitions could not be any other colour; submitted as it has been in all time to the equal effects of light by day, and darkness by night. The two antagonistic principles thus are absorbed into life, and produce the beautiful medium so agreeable to vision, which ensues by the mixture of the blue of darkness and the yellow of light.

The reflection of any object in a medium can never have the strength of the cause, inasmuch as it is a secondary power. The result is, a light object is less light, or darker, and a dark object is less dark, or lighter.

It is frequently the case, that an object, as for instance, a tower, shews light against a distant background of cloud, or mountain, but in an adjoining water it will be dark, with light surrounding it. The cause is, the distant cloud, or mountain, may not be reflected in the water at all, but the tower, being near the edge, is reflected in its full depth of colour. The angles of incidence and reflection causing these results are so well known that no further reference is necessary.

The transparency of water and its *visible* depth are amongst the greatest difficulties and triumphs of Art.

6.—Some Artists and amateurs, too much decry the power and utility of memory.

Trust nothing to memory, they exclaim! The fact is, all Art has nothing else to trust to. You cannot paint from nature, or the object, whilst looking at it. You look at nature, or the object, and paint from memory of what you have seen. What are you to do with a brilliant sunset, of a thousand hues and forms, which scarcely lasts ten minutes? You can do nothing but look at it steadily in all its wondrous forms and colours, and make a study of it the next morning. At best, it may be a feeble representation of what you have seen, but it is your only chance. Every day after neglected will make the original impression weaker, less true and effective. Nevertheless, the power of memory is wonderful in retaining forms, colours, and effects. A town scene being sketched merely in outline, Artists have been known to remember the materials, colours, lights and shadows, effects and details, for thirty years; though occupied during that period with a thousand other subjects.

A painting painted altogether from nature, will have its advantages of truth and detail, giving it a proportionate value in Art; but a well sketched, well selected subject, seen under an effect that admits of only a few minutes' observation, often turns out a more valuable work, as far as mind, atmospheric beauties, and mysteries are concerned. It may be explained further, by stating that a painter selecting an elaborate and full subject of near and distant scenery, begins carefully to embody it on canvas, and the next day it is enveloped in such poetical mist and indistinctness, that it is worth a thousand

clear visible days, and may not happen again for months, and this one day of earth's passing poetry and beauty, should be preferred to all the clearness of mere realities, and memory is thus the Artist's only resource, and well do they appreciate it, and embody its retentions in the magnificent effects they give us.

7.—An Artist often goes to nature to find a subject for a pre-conceived idea.

He sees beautiful effects connected with unpicturesque or indifferent subjects. He preserves the effect, and seeks a suitable or better subject elsewhere. Nature has no respect to localities. It gilds the cottage of the peasant with the same golden tints which glitter on the pinnacled cathedral, or shine in dazzling chromes from palace windows; and after a sunset shower, the wet sides of the dwellings in the dingy back street, glow as brilliant in vermilion light as the gorgeous mansions of aristocratic regions.

8.—The outer world knows little or nothing of the artistic mind and its never-ending sources of delight. He sees a thousand beauties where the unthinking multitudes see nothing. Is it an old ruin; his eye is wandering over every stone, with their varied tints of grays, greens, floral and weather stains, hanging weeds, amongst ivy leaves, and deep shadows softened into mysterious gloom. Is it an old knarled oak; his eye is rambling over every crack and streak, watching the parts stripped

of bark, following the strange vagaries of innumerable branches, and looking at the tints of the stem till all is fixed in his observant mind. Is it an ancient city; his eye traces the different colours of the buildings, whether of brick, wood, stone, or plaster, weather stained, or broken, clear, or well defined in light and shade, or softened with smoke, and aeriel effects. He watches the never-ceasing changes of passing clouds, notices the brilliance and sharpness of sun-lit brightness, the transparency of thin vapours, which shew other clouds or sky through; looks with wonder on their mountain-like masses, that rise tier above tier, with an apparent solidity, as though a carriage might ride over their firm substances; again, upwards, further into space, the sight wanders to far off streaks of thinly illumined vapours, which seem beyond the influence of earth, and bordering on heavenly regions impenetrable by man. The gray lights of dewy morn; the dark but still penetrable thunder cloud, the soothing dim shades of evening, which cover the world's beauties with shadowy gloom, as though the light of day was mourning to leave the loveliness of earth unseen; the rising full-moon, which rides majestically amongst stars and their light night clouds, and sheds over mountain and lake, wood and meadow, such wondrous impenetrable mysteries: all are the legitimate subjects for the painter's observation, thoughts, and pencil.

What is still more strange, is, that the progress of time in the education of the Artistic mind, or his industry, in no way closes, or exhausts the efforts

of nature, to satisfy him; for every day that dawns, and from morning to eve, brings new beauties, new arrangements of lights, shades, and effects. So wonderful is the fulness of the mind of nature, that it may be written with safety, that never since the world began have there been two sunsets exactly alike where clouds and vapours have ministered to their glories.

Beyond even these, the refinements and delicacies of nature, in form, light, colour, and shadow, are hitherto quite beyond the reach of Art in imitation. Venus casts a shadow of an object on the surface of this Planet, and Jupiter illumines with a faint glowing ring the clouds of night; and meteors spread a swift unearthly train of brilliants of their own heavenly grandeur around our astonished gaze; and Sirius and belted Orion are reflected in the still waters of a lake in the quiet of the blue twilight amongst the dark shadowy hills; and in the cold clear winter evenings, when the sun-set tints are just fading from the clear blue sky, the Aurora arises, and with the most delicate quiverings of light, wanders over the distant Heavens in colours of every hue, roseate, purple, pale blue, and paler yellow, till air and sky become one fulness of glories not imitable in art; should the individual come who will embody these spiritual and fleeting dreams of earth's glowing mysteries. And when the clear cold north-east wind gently passes over the earth, and the Sun has gone down in the west, in the east will be seen occassionally under certain modifications of the atmosphere one of the most

poetical, mysterious, and unobserved effects this Planet offers; namely, the shadow of the earth on the air, which may be seen rising in a lovely neutral blue in an arc in the eastern Heavens, the apex of the arc being exactly opposite or moving south of where the Sun went down; the two extremes of the arc being 180° apart, the whole gradually rising and disappearing as the Sun gets lower beneath the western horizon, till night and the brilliant stars assert their dominion over the silence of the cold mists and darkness of the winter night. No effect in nature presents such a magnificent arc as this sublime but delicate shadow of the Earth on the air. It can also be seen in summer when the wind is north-east and quiet.* Again, ocean lights at midnight sparkle in such brilliance, they seem the playful touches of unseen spirits sporting with the lights of Heaven on Earth; and trembling leaves shine with an inimitable night-green from the dim light of moon-lit clouds in the solemnity of darkness; and the spider's web in the dewy morn is one magnificent whirl of rings of brilliant pearls, each with its tiny lights and delicate shadows; and in the dark deep pool which lies quiet amongst over-

* Often, after a thorough rainy day, the sky clears and the red Sun gets below the clouds and illuminates the under surfaces, and the deep crimson rays glitter on wet rocks and trunks of trees, and the still dropping leaves throw off sparks of living light into the clear warm air, and the heart is relieved of a burden of the loneliness of the darkness of day, and rejoices in a brief glory of the lovely earth, and the soul feels that this world is its home, as its strong affections cling to its everlasting, everchanging beauties, spreading over sea, mountain, and valley, the endless grandeur of nature's thoughts, as the mind of God broods over its own magnificent effects.

hanging rocks, the rain-drops from long grasses and weeds, make ring after ring of the most fairy pencilling and delicacy of light; and in the smooth flowing sun-lit stream, the autumn leaf floating on the surface, casts the most tender passing shadow on the rocky bed below; and the solemnity of the first break of day amongst rocks, and dark woods, and quiet deep waters, seems the embodiment of the spirit of poetry, which hovers around the indistinctness of earth, claiming a few moments of brief indulgence and adoration before garish day exposes all things to the gaze of man's indifference to earth's loveliness; and amongst the wonders of ocean and shore lights, are those secondary effects, whereby when the angles of incidence and reflection are equal, the lights from a smooth sea or wet shore illumine the under sides of clouds. No effects of nature are so tenderly sweet and delicate as these unknown, unremarked, unrepresented beauties of Earth and Sky.

Poetry may take possession of many of these spiritual manifestations, but the time may come when Art will be so refined in its operations as to reveal every mystery of the divine thought to industrious man.

I cannot yet leave my loved earth, and its ever changing beauties that dwell and hover round us like spiritual ministerings of the heavenly mind.

I see a calm lovely lake at early morn, and the woods and rocks on the opposite side rise upwards close from the lake side, and cottages and houses are dotted here and there, and the early smoke from

the dwellings rises straight up, and mingles with the woods and rocks above, and lake, woods, cottages, and the smoke, are all seen dimly through a sweet gray morning mist, which envelops all things. Deep down in the lake, I see the woods, rocks, houses, and smoke, all inverted in increased mistiness, but all there to every tree and crevice; and over this reflection is a dim quiet surface just perceptible, and would not be that, but that the faintest zephyr that ever breathed changes the surface a little lighter or darker, like a wafting passage of thought in a morning dream. Over both reflection and lake surface, rests a still quiet morning mist, so that to give this successfully in art, would require four effects to be represented, the whole having a lightness of tint about them, pertaining to coming day. There is the reality of the hills, woods, and rocks; the cottages and smoke, seen through fog; there is the reflection of all these in the still lake, a little more indistinct and wavering or uncertain in touch, there is the lake itself, which must be visible as water, and there is the morning mist over that, and all this should be accomplished by the Artist; or there is the danger of the intellectual mind, who may see these effects, getting before the artistic power, which should ever precede the multitudes in observation and realization of the earth's more refined and beautiful effects.

Again, I see forest and mountain scenes in the gloom of night, and the leafy masses seen dimly illuminated by Stars and Planets millions of miles

off, and some near cornfields wave in a quivering dim light at midnight, and the thought arises whether in the dreamy hours of darkness and sleep, the Planets breathe sweet intercourse of thoughts to each other, and their language is the flowers and the gently trembling leaves, and the rippling ocean, and the murmur of the distant sea over shores, and shells, and sand, or the dark spray against rocks and amongst tangled sea-weed. Again I see, the far off mountain cliff, which seems a wild spirit of earth revelling in sky glories of deepest blues, and tinged with faint heavenly lights, and a bright overhanging star glitters in a mountain torrent at midnight, sparkling like a diamond of unearthly light, or a distant gleaming spirit from Heaven.

The most singular thing appertaining to this sublime never-ceasing poetry of nature, is, that individuals are constantly, day and night, amidst its most poetic scenes and beauties, yet never see it, and could not see it if you drew their attention to it, and would smile in derision, and ask—What it was all worth in a money point of view? There could not be a more wide feeling in thought and purpose in life between beings of other Planets and this, than there exists on our own earth.

9.—The colouring of a picture requires a key or pitch, just as in music. If the painter amongst his principal group of pictures, revels in the purity of the primitive colours, he must carry it out by repetitions, subdued certainly, but still vigorous enough to sustain the original key of the picture. If the

painter groups a focus of pure primitive colours, and paints all the rest on what may be called a Flemish key, the spectator will be so confounded, that although the tints in the subdued parts may be the complementary colours of the principal group, the eye will never get away from it, and the subordinate parts may as well be so many clouds, for any use they are in continuation of the tale or subject of the picture. The English School is at present, and has been for the last century, at the head of all colourists in the world of art. It only remains to add science to art, or in other words, to be well informed in the science of art, to keep our painters in the high position they have attained.* The daring and power our Artists have exhibited, throw the French, Flemish, Dutch, and German Schools into apparent tameness, from their fear or timidity of using the primitive colours in the brilliance nature has given them to us.

In permanency and brilliance of colour we do not seem to surpass the old masters, and it is questionable whether our pigments are equal to theirs in either of the above importancies.

It is an unfortunate thing to both art and manufacture, that such lovely colours as the lakes, carmines, carnations, and lilacs are all fading colours. Whether used as pigments in painting, or as dyes in manufactures, they are so evanescent, from three to four years will see every vestige fled. No dress, ribbon, paper, or other article of a lake or lilac hue, will keep its colour more than two or

* Instance Mulready and Poole.

three years, nor that, if exposed to the sun. Even when mixed with colours of a more permanent character, the pink portion will fade, and leave the other in sole possession.

All colours of vegetable origin are fleeting and cannot be depended on. Vehicles have been the study of artists in all time. In oil-painting it is from the oils, not the pigments, that early or permanent injury has to be apprehended. The free use of the vehicles is so fascinating and rich in transparency, that the artist can with difficulty restrain temptation in using them. Water colours have great advantages of giving air without fear of decay or changing colour, and by painting foregrounds with ale or porter instead of water, increased power is obtained. In oil-painting many artists never lose sight of the canvas in shadow. Opaqueness can be tolerated in light, but not in shadow. To distinguish colour from shade is one of the engravers greatest difficulties and finest accomplishments.

The colour of the air is more apparent in shadow than in light. It requires a long distance for atmosphere to shew over light. In looking at a wooded hill of scarcely a mile distance, the light sides of the trees will shew their local colour very little influenced by the amount of air between them and the eye; but in the hollows and shaded sides, the veritable blue of the air will be seen as air, and gives a lovely effect in art when well and successfully done. In further distances the air begins to affect the light also; and still further,

blends both into aerial effects of such sweetness and softness as scarcely to leave the light and shadow distinguishable.

There are the most lovely pearly grays, lilacs, pinks, and more brilliant tints in stones. When cut into and polished, they shew colours of such delicacy, beauty, and value in art, that the question arises, whether these have been sufficiently utilized, ground, and made into pigments? They would add much to the painter's vocabulary, and would undoubtedly be permanent. Modern science ought not to let Rubens, Titians, Paul Veronese, or any other artist of antiquity excel us in brilliance and permanency of colours. It is a legitimate object of art to imitate nature in its glorious effulgence of colour. The means to do it are provided, we have only to discover and use them.

10.—One of the finest principles in art; in form, light, shadow, and colour, is indication. The painter of high accomplishments gets beyond the glaring imitations of realities in plain broad daylight effects, and sighs for more interesting mind suggestions, and poetical expressions. He then aims at mystery; but it is mystery with a meaning, aye! and a deep soul meaning too. He endeavours to express a thought in such a way, that every beholder will seek and satisfy his own interpretation of the passage. A hint is given, not a staring portrait of a substance. The spectator comes again and again to such a picture. He never tires of it. Painters will eventually find, that natural objects are only

the rudimentary offerings or suggestions of nature, for the mind to envelope with its own spiritualized power of thought.

A thousand glories of light and beauties pass over the earth daily, from early dawn to evening twilight, but it is only the mind of man that sees them. Were they created for him? For anything the inferior creations see or know about earth's poetry and loveliness, it might never have been, at least we think so. All the grandeur of the earth and heavens is as much in the mind of man, as it is in nature, and but for an appreciating, admiring mind it might as well not have existed.

Are we not justified in saying, that the glories of the earth are created for the mind material of the Planet to see and enjoy? Nature does nothing without a purpose. If it spreads lovely colours and effects daily and nightly over the earth, it is for sight to see and mind to contemplate. It is for the intellectual enjoyment of His creatures, and that we may glorify the great and good Giver of all these daily delights. To the painter is given the sublime power of rendering the swiftly fleeting passing thoughts, or treasures of the mind of God, permanent on the truthful, heaven-impressed genius of the canvas.

11.—The normal effect of nature is darkness. The light on all objects on this Planet is superficial, on the outside surfaces. This gives a power in art which enables the painter in oil or body colours, to paint the dark first and the lights on it, which is

nature's mode of exhibiting her objects and effects. It is objected to this, that in oil, by painting lights over a dark ground, the lights sink into it and lose their brilliance. The remedy for this is to lay in the subject in its dark state, and put the canvas by, for a year, or if possible two years. The painting may be then continued with a brilliance, power, and permanency, no other mode will give. Few artists are aware what power they may obtain by this method of laying a subject in smoothly, and letting the canvas lye by, but always exposed to light for a length of time. Even a second painting left to harden a considerable time will be much better for the finishing touches, which will then retain their vividness as long as the picture will last. If the painter objects to laying in a subject and hanging it up for one or two years to harden, on account of him losing all interest in it, he can at least cover a canvas with a smooth surface of white and vermilion, and let that lye by for a year or two. Many artists paint and finish their pictures at once. The lights and colours of such works must necessarily sink, and become weak in time. Artists say they should lose all interest in a picture kept so long. If a good study is prepared for it, and it is looked at occasionally, the interest and ideas will increase. A true painter never forgets his subject. It is a part of his nature.

CHAPTER VII.

1. Perspectives. 2. Textures. 3. Science in Art.

1.—Everything in nature, whether of colour, light, shadow, edge, form, line, substance, texture, or other appearance, assumes a different state as it recedes from the eye. There are no exceptions to this universal law of nature.

There is therefore a perspective of colour, a perspective of light and shadow, a perspective of edge, a perspective of line and form, and a perspective of atmosphere. These must be examined separately.

The perspective of colour means that any colour receding from the eye in any direction, becomes subject to the colour of the atmosphere and its varied densities. Red for instance, becomes less red and with a tinge of blue-gray over it. A variety of nicetes take place which the observant artist notes in his experience, as for instance density of atmosphere approaching fog, will do that in a few yards which on other occasions may not take place in a few miles; and in a pure atmosphere in broad day, white and yellow will not be turned into gray and green, the white will become yellow, and the yellow pink, and the white itself becomes pink by extreme distance. I have seen Mont-Blanc at a distance of 60 miles assume a most lovely pink, the principle of darkness, blue, having but little effect on the real snowy whiteness of the object in

consequence of the purity of the air. It is in exact observance of this principle that the artist applies his purest colours on the principal group of his picture, which are supposed to be nearest the eye, and the receding groups or objects become more subdued, grayer, less intense, and the artist is cautioned, that the perspective of colours, both in nature and in the picture, are not simply a fainter tone of the colour, but that and the colour of the atmosphere also.

The perspective of light and shadow is of great importance in a picture. By it the Artist keeps everything in its place, and thus prevents distant objects from over-hanging near ones; each object appearing the same relative distance from the eye in the picture as it does in nature. It is the shaded side of objects that soonest shews the effect and colour of the air. Whatever the local colour, it becomes grayer, and then bluer. The shaded sides and crevices of distant snowy mountains are so blue, they are scarcely distinguishable from the surrounding sky. The light sides of objects are less influenced by distance. The local colour has much to do with it, as before mentioned.

According to the density of the atmosphere, each eventually becomes absorbed in its own colour, except pure white, which appears incapable of being absorbed at any distance on the rotundity of this Planet, except in very low dense regions.

There is a wide distinction between shade and shadow, which requires the most careful attention of the Artist. Shade is the shaded side of an

object, shadow is the shadow of that object on some other surface, the ground or other object. Now, whilst both shade and shadow are subject to the influence of the atmosphere on receding into it, the shadow of one object on another is a study requiring the most careful attention of the painter.

By truth in this principle, the distance of an object which causes a shadow can be pretty well indicated, though the object is not in the picture. The nearer an object approaches its shadow, the darker and sharper that shadow becomes. For instance, supposing a tree is only two or three yards from the illuminated side of a building, at a tolerably brilliant sunset, this tree will cast a solid, dark, well defined shadow on the building; supposing another tree is 50 or 100 yards from the building, it will cast a faint, indistinct, softened, less defined shadow. Now, it may be necessary to give a view of this façade so illuminated, and with the shadows as seen, but without the trees, and their distance from the building is thus truthfully suggested by the Artist. The principle is easily ascertained by holding your pen or pencil at a distance from your paper towards the gas or other light, when the shadow will be seen in its weakness and its soft indistinct edge, gradually approach your pen to the paper and it will become still darker and sharper as it approaches it; and this principle equally governs all objects in nature near or distant. It will be observed that sun-shadows preserve their sharp edges to greater distances than other lights, and that the sharpness

or indistinctness of shadows does not depend so much on the nearness or distance of the light, as on the nearness or distance of the object from its shadow.

The perspective of light and shadow requires careful study and close local observation of the effect selected, because it varies so much under the ever-changing colours and densities of the atmosphere; so that exceptions arise to general rules, by which the Artist will know when and how to regulate his tints. As a rule, all shaded sides of objects and shadows will be most affected by the general blue of the atmosphere; but at sunset both shades and shadows will be affected by the warm tints of the air, as well as the lights, though in the warmest sunset they will be bluer than the lights.

Under most circumstances the perspective of light gives it warmer. It is only in mists and fogs, that light becomes grayer. Even our fountains of light, by day and night shew the truth of the principle. The sun as it sets grows yellower, then redder, even to deep crimson, from the fixed unalterable laws of colour and density of atmosphere, and the moon rising in a thick atmosphere assumes an enlarged form, and almost orange colour, and as it emerges from the more dense regions nearer the earth, it diminishes in size and colour. The enlargement of both the sun and moon, at rising or setting, being due to a magnifying power of the air, which increases always in the ratio of its density.

It may not be irrelevant to this part of the subject to notice the extraordinary power of the

principle of transparency as exhibited in our atmosphere and in universal space. There cannot be any doubt but that the principle of atmospheric perspective rules all space. To give it in the vastness of its extent and capabilities as exhibited to vision on this Planet, is to say, that sight, after penetrating through regions of space beyond the bounds of our astral system, is able to see through the unknown, incalculable distances of creation, to other astral systems, this immensity of space being in strict accordance with the nature of the medium between such far off creations and the eye.

One of the most singular effects connected with this principle of atmosphere is, that not only the planet Mars should appear a red colour to our gaze at that distance, which must undoubtedly be assigned to local colour, but the still more immeasurable distance of certain stars should be unable to nullify their local colour. The wonder is still increased by the almost certain truth, that these infinite spaces are not a vacuum, for light must have a medium to transmit its rays to any distance.

There must be a power in the local colour of Mars and in the coloured stars, which we are totally unacquainted with on this Planet, to enable us to see that colour at such immense distances.

The perspective of edge has been but little attended to in all times of art, and attention to it at all is due entirely to our English landscape painters. The hard outlines of the early painters have been transmitted through all the schools of art to the present time.

It would appear that artistic feeling had been the precursor of softened edges taking the lead of natural observation. There are two modes in which this perspective of edge must be attended to in art. As a principal group of figures in a picture must have the greatest purity of colour and sharpness of edge, so the subordinate parts must have a more subdued tone of colour and a more softened edge. And as the principal buildings and natural objects in a landscape which are nearest the eye will have the sharpest edge and most firm and precise touch, so objects as they recede into distance will have their edges affected by the refraction of the atmosphere; that is, they will be softer and more indistinct in appearance, and the Artist has by this knowledge a power of natural truth given him to give or assist the true atmospheric effect of objects receding from the eye.

The perspective of line, called Linear Perspective.

On investigating this science many years ago, I found it in a very unsatisfactory state, and was perfectly astonished that a science with any pretensions to truth should have remained in such a state without any effort being made to rectify its glaring errors. Perspective should consist of a code of laws or rules, obedience to which should produce on the paper a true representation of the object delineated. Here is a science in such a state that it asserts the contrary to be the truth. For instance, it states that in a front view of a building with pillars, those

which are the furthest from the eye will appear the largest, and must be represented so, which is the reverse of truth.* It states, that in taking a front view of numerous buildings, those which recede from the eye laterally on each side, should have no perspective diminution, which is not true. All objects that recede from the eye in any direction, front or angularly, lessen as they recede. It is stated, that with regard to objects fronting the eye, or in other words parallel to the picture, that the eye reduces them in the picture as it does in nature, which is the reverse of truth; the eye enlarges them.† Numerous instances of these radical errors could be recorded, but the above are quite sufficient to condemn any science offering such absurdities as truths. To change the mode of enquiries into this important subject, it may be stated, that every science ought to be able to answer any reasonable question put to it honestly by an intelligent enquirer after truth. For instance, take two, or any number of lines in front of the spectator, or parallel to the base of the picture, and ask the advocates of Rectilinear Perspective where these lines would terminate in nature, how they would terminate, or what are the laws which govern them; they are perfectly unable to answer the question. Also, suppose an angular view is taken of a square building, the lines of which, both in the picture and in nature, incline from the vanishing point upwards; the advocates of right-lined perspective cannot answer the question—where these upward lines are

* Vid Malton. Book II., Sec. VI., page 96.

† Vid plate X., Fig. I., page 32. Curvilinear Perspective.

going to, where they will terminate, or what are the laws which govern them either in nature or art. To put the question in another form, do these lines, which are ascending from their vanishing point in nature and in the picture, continue to ascend? If the right-lines of nature continue right lines, these lines must go upwards into space, but where or how? as they are divergent from a given point, right-lined perspective does not say, and no thought is taken that these are truly horizontal lines, seen under an accidental disposition. These questions might be multiplied *ad infinitum*, but it is not intended in these thoughts to enter by figures or theorems further into the science. We have done that elsewhere. The science is in such a state of confusion that lines which at 90° from their vanishing point are beginning to decline again to the horizon, are made continually to ascend, so that objects in nature which are going smaller, in the picture are going larger. In all the history of the science, a line having one vanishing point, it was never contemplated or thought of that it must have another. All right lines on this Earth must have two termini.

Finding right-lined perspective in this unsatisfactory condition, I did what many Artists have done, rejected it altogether, determining to trust to the eye alone. Thinking about this subject, I was soon led to the conclusion, first, that right-lined perspective was not the truth, as it is in nature; secondly, that there must be a law of nature strictly and undeniably true, the law which

governs our vision of all objects on earth, or in the space around us.

I determined therefore to sketch nature exactly as I saw it, to give every line its elevation, or depression from the horizon as it appeared. These lines were then carefully examined and traced, sketch after sketch. They were all found to have the same inclinations, and obeying the same law. The result was the discovery of the Curvilinear Perspective of nature; a system which has settled this question for all time, but which, though acknowledged to be the truth as it is in nature, is yet far from being understood how to use it in art.

In my simplicity, when firmly convinced of the truth of the Curvilinear Perspective of nature, I flattered myself I had made a most important discovery. I thought it was strange that all mankind had been looking at nature since the creation, and had not discovered the true laws of the perspective of vision. I was speedily undeceived in my contemplations of fame or reward, for from that time to this I have had nothing but one series of abuse for putting these discoveries on record. Even the Society of Arts on hearing my explanatory lecture at their rooms rose in such determined opposition, they refused to print the lecture in their journal. I had, however, one or two lucid intervals which enabled me to rest calmly, and wait the verdict of time. These intervals were first, Sir David Brewster came to me personally to examine the subject, and on our closing the examination (I use his own words) he said "It's quite true, take your

vertical lines also to their vanishing point, and your system is perfect." Secondly, the late Earl of Rosse and the first Earl of Ellesmere, both men of science, each sent for me, without the other's knowledge, to explain the system to them, each expressing his conviction of its truth, the Earl of Ellesmere adding, that, he was sure the ancient Egyptians had some ideas of observance connected with it, as their buildings, pillars, windows, and doors, were all formed on the principle of a diminution of form, as objects receded from the eye in any direction.

Having said thus much, the only object I wish to draw attention to is, that Artists have neglected to attend to the statement in my work, "that no perspective, Right-lined or Curvilinear, can give the true appearance of nature on a flat surface." The consequence is, there never was a picture painted on a flat surface, nor ever will be, that gave or can give the true perspective of nature. The cause of this is, the painter is endeavouring to give a portion of nature on a flat surface, whilst nature is SURROUNDING the eye with just that much of the 360° which he includes in his picture, as a curve. The result is, that in right-lined perspective, lines are going up or enlarging in a picture, which in nature are declining or diminishing, and in Curvilinear Perspective, buildings appear round which ought to appear flat. The sum of these anomalies lies in the fact, that the only true perspective that can be obtained is Curvilinear Perspective on a cylindric picture. As we cannot have pictures of this form, we must ac-

comodate ourselves to the circumstances imposed upon us. Right-lined Perspective will not give much distortion under 60°, except in front views of pillared buildings, or even with a single pillar with an abacus. Beyond 60° the distortion is continuing and exposing its errors so palpably, that it cannot be proceeded with; it is here that Curvilinear Perspective steps in, and as in nature, buildings, or views, never look distorted to vision; so this being the true law of nature, will enable the Artist who wishes to extend his views laterally to any extent, 180°, or even the whole 360°, to go on without distortion.

To those who will not give the trouble to master the science profoundly, but who wish to draw large extents with truth; the only advice that can be given is, to put aside all idea of any perspective, and draw accurately what you see, you will find there is nothing to hinder you from going on to any extent. If you are disposed to test this after, it will be found to be Curvilinear Perspective. In a work like this, the science cannot be further entered into. The various authors who have written on the subject must be carefully studied. When I published my Curvilinear Perspective, I never said or dreamt it was to supersede other systems. What I wrote was, that it was the true perspective of nature, irrespective of Art, and I pointed out wherein it would be useful in Art: where lateral general views were required, which right-lined perspective could not give without most disagreeable appearances to the eye.

The Perspective of Atmosphere is a principle of great importance. We are everywhere surrounded by a medium which has a local colour, which is nature's darkness, which is blue. As objects recede from the eye into this medium, though the most transparent of all natural phenomena, the increased quantity by distance begins to have an effect on the local colour of all objects absorbed in it, till at last it resolves everything into itself; and all objects become the local colour of the air, whether of early gray of morn, the blue mingling of noon day, or the warm tinges of evening. Each in its turn, subject to electric or accidental changes, eventually overcomes every object on this Planet, absorbing it into the colour of its constantly changing effects. This mingling of terrestrial objects with the atmosphere is particularly observable at noon day, when they are less influenced by colour, then objects become bluer and still more blue, till they are scarcely distinguishable from the surrounding air. At sun-set a very different effect takes place though from the same cause. The air becomes warmer in colour, and distant objects, instead of becoming bluer as at noon-day light, become warmer, and are eventually absorbed into, and are little different from the red and yellow clouds by which they are surrounded.

What is called Aerial Perspective is quite independant of the Perspective of Form. If either could be withdrawn, the other would exist. This perspective of atmosphere must be particularly attended to in skies. These are of such ever

changing effects, it is difficult to give any rules save this, that its concave appearance must always be apparent, and not as some have said, to be so upright you might put a ladder against it.

In Switzerland and Italy the windows in a white cottage can be seen twenty and thirty miles off. This is rarely the case in England. I have, however, seen the Castle of Edinburgh from Stirling Castle, which is a distance of 60 miles.

It is astonishing how insignificant things in nature become of vast importance when introduced in the picture in a prominent part. A stump of a tree, a ragged cottage girl, a plough, as in one of Turner's pictures, a few large leaves or stones, some pots or pans, anything which is given as a focus from which the aeriel perspective of the picture is to recede. It only requires that the depth of shadow or of colour should not be repeated, but that the atmospheric perspective should go from this as its key.

2.—Effects in nature, such as the texture of ground, rocks, foliage of trees, rough surfaces of any description, should be treated in art with the utmost playfulness of mystery In a light foreground, the local colour being washed in, a rather dry brush of colour, a little darker, dashed quickly over it so as to catch the tops of the grain of the paper, will do more towards truth in two seconds than the most elaborate niggling of hours; and if the foreground be dark, a dry brush of body colour a little lighter, will produce the same effect, having

this advantage, that it will imitate nature's mode of putting its light on the outside or upper surface of a dark ground.

There is another mode of obtaining this in water colours, by washing over the dark with a wet brush, pressing it on the paper, which brings the colour off the surface in a granulated manner, producing the effect required.

3.—Artists will do well to make themselves acquainted with all those sciences that bear on external appearances. Geology, astronomy, botany, anatomy, mathematics, to understand perspective, architecture, somewhat of chemistry, and natural history. For want of these necessary accomplishments the most glaring and ridiculous errors are seen in every exhibition of pictures. I have frequently seen in pictures of sun-sets, the crescent-moon painted with its illuminated cusp or horns turned the wrong way, and it is no uncommon thing to see the new moon placed at 45° from the sun at setting. In geology, matters are quite as bad, the most extraordinary jumblement of undefined and undefinable strata, belonging to no order or series, Eocene, Miocene, or Pleocene, as known on this globe; the Artist's only idea having been that they were rocks with something like sharp edges, all quite innocent of truth. The same in botany, wild flowers are introduced in a foreground, with a form of leaves that do not belong to them. In late twilight, stars are introduced which any school girl could tell you belonged to no constellations in

the heavens, and the half or new moon is given with the centre of its illuminated periphery opposite to, or in a right line to the centre of the sun's disk, which it never is. If the sun be setting, and an imaginary line is drawn from its centre to the opposite point of the horizon, which will then be 180° apart, the two extremes of which we will call A. A., whatever the altitude of the moon; a curved line from the centre of the sun's disk at "A," through the centre of the moon's disk to the opposite "A" in the horizon, will give the exact centre of the illuminated portion, and a chord from the centre of the moon to the centre of the sun will shew the difference between truth and error.*

In addition to these errors, rainbows are introduced, which the shadows of objects in the picture do not justify, either in situation or curve, and I never saw any Artist but Turner who dared to shew the smoke from chimneys, or steamers on the sea, going in contrary directions, which they appear to do when the wind is directly opposite the eye, and the chimneys or steamers are on each side.

In all pictures I have seen, without exception, the sun and moon at either setting or rising are given with very little difference in magnitude from what they are in the higher altitudes; whereas, in the clearest atmosphere they are much larger, and in more dense air are often double the circumference through the magnifying power of density.

*Vid page 55, sec. III., and plate XV. Curvilinear Perspective.

CHAPTER VIII.

1. Selection. 2. Repetition. 3. Change of Form. 4. Detail. 5. Selection Resumed. 6. Picture Dealers. 7. Separation of Principles in Judging of Pictures. 8. Natural Textures. 9. Natural Light. 10. Smoke of Towns.

1.—Selection. God makes Artists. They cannot be manufactured. They come from the coal barge, the loom, the costermonger's barrow, the tailor's board, the charity school, the counter, the street arab, the painter of back-doors and shutters, the barber's shop, the merchant's clerk,* and a thousand scattered sources mankind knows little or nothing of. There is no irreverence expressed of the Deity when it is said HE *will* be represented, *revealed* in HIS glories and beauties to the intellectual beings He has created. He has a purpose, viz., to contribute to their happiness. For this object the Artist shews us the seen mind of God in appearances.

The poet endeavours to reveal all the innate power of the Deity's mind, dictations, and conceptions, in painted language of passions, descriptions, and ideal imaginings of things unknown to the visible and unseen.

There is a strange feeling connected with this emanation from humble life, to the grandeur of the poetic and artistic mind. Nature is no respecter of persons, and seems to take their education in its own

* All facts.

hands. You may neglect them, and try to force them into other spheres of life, but you may as well take Canute's example and retire before the coming wave, for it will come. No earthly power can prevent the smothering spark from bursting into a flame which shall illuminate all mankind if God wills it.

It is only taking another view of the argument when it is said, the Deity loves to be SEEN in His grandeur of created beauties; KNOWN in His sublime elevation of poetic thought and intellectual power. HEARD in the soul-stirring, passionate, or soothing strains of Heaven-born music. God does not like to be unknown. The recipients of these gifts have therefore a duty to perform, which they had better not neglect, for God is strict in His demands, and tolerates no idleness. As far as Artists are concerned I can testify that no painter ceases to paint while he can handle a brush or embody an idea.

Having indulged in these preliminary thoughts, the great principle of selection must command the closest attention of the young Artist. In doing this let me recommend him not to look through other men's eyes. Nature is not so blank in its offerings that you need to copy any man. If nature has given you the power to reveal its beauties, it will provide the mode of expressing them, without any reference to other men's minds. To be a mannerist is bad enough, but to be a copyist, getting carried on stronger men's shoulders, is intolerable. Certainly, you should look at all painters, ancient and modern,

to see what they do, and have done, and ascertain the principles on which they have raised their names to such eminence in art; but to servilely imitate their mode of either thought or practice, will for ever exclude you from producing anything worth a look in the artistic world. It is like wearing another man's clothes, they will never fit you, not being made for you, and you will only wander about, an object of ridicule to the well informed.*

It is therefore absolutely necessary for your future position in Art, that you go to nature with a sincere self-reliance on your own mind and power, and that you set to work with a determination to embody your own impressions and feelings of the subject before you. You will thus gain originality.

It is presumed you are acquainted with those rudimentary principles of Art which will lead you at once, and almost without thinking about them, to make a good general arrangement of the composition of the whole, and to dispose or select your various objects so that everything, whilst it appears accidental, is still in its proper place, and could not be

* The more you are amongst first-class pictures and the better, they keep up the eye to its proper standard. I knew a young Artist of promise who said he would go and live amongst nature and study it only, and that he would never look at the works of others, or visit an Exhibition again. He did so and was ruined, never having risen even to respectable mediocrity.

Also one of our first men was heard to say, that having been sent for, to look at a picture which turned out to be a very inferior work, his eye was so affected, so lowered in its standard of judgment, it was several days before it came right again.

any different or better. With respect to the general composition, Artists have found it necessary to select their subjects so that they shall assume something of a pyramidal, diagonal, or circular form, the latter being often in the perspective of a circle, or flattened. Having determined which of these general arrangements will best shew the aggregate of subjects intended to be introduced, taste comes to the assistance of knowledge, and dictates numerous valuable suggestions, a few of which will suffice. For instance, if a pyramidal form is selected, the apex of the pyramid must not be in the centre of the picture, neither must it be over the centre of its base; and as the summit of it will most probably be an important subject in a picture, such as the peak of a mountain, a church spire, a castle tower, a tall tree, or mast of a ship, no object of importance, nor a group of figures, must be placed directly under it. Whilst I have said these are dictations of taste, I must state that they are as much absolute rules as any principles of art, they cannot be violated. In Prout's and Turner's drawings for instance, every figure, every object, to a basket or a wheelbarrow, is in its proper place, and could not be any different, and yet the whole looks a lovely whole, as if everything was mere accident. To enter into all these matters of taste with regard to the general composition of a picture, would require a volume; it will be sufficient to state, that whichever of the arrangements is selected, it must be so broken, as to destroy all formality, and the principle is in no way to intrude itself on the observer. He

is not supposed to know anything about it, more than that it is pleasing and satisfactory to his mind.

A few general observations on necessary principles may close this part of the subject.

If you have a principal figure or object at a third from one side of the picture, there must be nothing of importance at a third from the other side. The odd divisions of a picture are found to be the best for principal or important objects, as a third, a fifth, a seventh; but one, as a third being selected, another may be on a fifth, and so on. Never let a line, such for instance as the outside edge of a pillar, rise out of the head of a figure. Let there be as few parallel lines as possible, especially lines parallel to the base of the picture.

If you have two towers or more, or any principal objects, you should change the lights and shadows on them, some rising dark against light, some light surrounded by shade, others with a play of both lights and shadows, on the same tower; and a tall pillar or other object having long lines should change, one part being dim against light, and the other light against shadow. Two objects, such as masts or spires, should not be the same height, neither should they be placed equidistant from the sides, or from the centre. Front views of objects are always to be avoided. The deepest shaded part of a round object should never be in the centre. The most strict relative proportion must go through the whole picture, according to the scale it is commenced with; the most illiterate observer will detect any error of this kind. One object rising behind another

must not rise from the centre of the fore one. You must not commence the picture at the sides, at equal distances from the top.

If you have a large principal building or a lake, or other object in the picture, do not put a principal group of figures or boats in the centre. If you have a perspective descent of lines in your picture, let your general grouping of figures go the contrary way, and avoid having lines of mountains, or buildings, whatever their inclination, following parallel one under another.

A central view should not be taken of an aisle, an interior of any kind, an avenue of trees, a road, or street, the best view will be at a third from either side.

In all pictures whatever, even a "portrait of a gentleman," there ought to be SPACE. The said gentleman may only be in a parlour, with the indispensable red curtain behind him, but the space between his stiffly arranged coat and cravat, and the red curtain should be visible. All objects are a certain distance from the eye, and that distance every beholder ought to recognize in the picture as he does in nature.

Every picture of a single object as a principal, as for instance, a rustic figure, an isolated building, should have a secondary object of some importance, though subordinate. The eye under all circumstances in nature and art, gets tired, exhausted, or satiated with one object or effect, and requires change, relief. This secondary object should not be in the same plane as the original, some space ought to

intervene; but there may be exceptions to this caution, as for instance, in the celebrated portrait of Sir Walter Scott, where the favourite hound is introduced at an equal distance from the eye as the principal. Whenever this secondary object is introduced, the eye turns again to the principal with renewed pleasure.

The painter should always have a careful eye to transparency, as distinguished from opaqueness in shadow. Supposing a drawing of two vases, one an opaque substance, the other transparent. The opaque one will be subject to the law before mentioned, which states, that colour in shadow has no increase of colour, it is the local colour and shadow mixed, but in transparent objects the colour is increased, though being in shadow some gray must be introduced. There are many delicacies which a painter should carefully observe bearing on this subject. A piece of thin colourless tissue paper, held up to the light is yellow, doubled or another added, it is still yellower, and others still added produce a deep orange-red; so a transparent coloured vase will have its shadows deepened in local colour, which an opaque one is incapable of. A thin transparent cloud may often be seen in front of another cloud, the result is always a deepening of the colour towards yellow and red.

It has been stated, I hope not often, for artists' sake, that there cannot be a shadow within a shadow. Those who state this have been very indifferent observers of nature. The refractive

powers of the air penetrate to such deep recesses of absence of light, that the locality can scarcely be assigned, that will not reveal a shadow over or within a shadow. It has been stated also, that pure still water is incapable of receiving true defined shadow, which is also an error, as any one may easily detect who resides long amongst lake scenery.

But surely this catalogue of principles is unnecessary. Are not all Artists acquainted with them as it were by intuition, or does not their taste lead them to these rudimentary but necessary truths? Artists who have studied their grammar before they commenced the interpretation of nature, know and find how useful knowledge is; but every Exhibition reveals specimens of bad grammar, amidst all the blaze of poetic effects and patient execution; and it is a pity so much talent and labour should be spoiled for want of a little attention to truths which cannot be dispensed with. No amount of beauty of finish, or display of sentiment, can make a picture valuable which is wanting in first principles. Also, every gentleman professing to be well educated, ought to know and be able to detect these things, and thus speak of art with confidence in society.

2.—There is a principle of "repetition" which seems to pervade both nature and art with an imperative impression. Painting, poetry, music, and architecture, are alike under obligation to its demands. The poet, actor, musician, and architect,

will understand the meaning of this principle. In these remarks I have only to do with painting.

The explanation of this relates both to form and colour. If a principal group of figures contains a brilliant red in the costume, this red must be repeated, either less in degree of colour, or much less in magnitude, and the repetition must not be parallel to the principal, either horizontally or vertically. If it be white, blue, or other colour, the repetition must be the same. We have nothing further to say, than that the eye requires it. If in form, a repetition of the principal group or object must be repeated or contrasted with subordinate ones; as for instance, a tall mast of a boat in a foreground, may have its repetition in a small mast of a distant boat, in some other part of the picture, not exactly parallel horizontally with the principal. The same may be said of a figure, a tower, or any object. The mind becomes uneasy, pained, after seeing a principal object, or colour, to find no repetition to refer to. The principle requires careful attention.

3.—There is a principle of change of form, which nature seems to be very particular about, but which does not receive due attention from artists and architects. If all trees were alike in shape, and all mountains similar in form, we should not have observed the principle; but when we see a well rounded graceful elm or ash, and by them, a tall slim poplar or spiral conifer, and then a solid almost globular walnut, contrasted with a light feathery birch, we see a purpose in God's intentions. The

same of peaked mountains and massive ones, all testify to change of almost infinitude of character. Bear this out in art. Have you a massive square tower, contrast it with some pointed gable or spire; let the mind be impressed with the fact that variety and change of form in nature, is to be a resource in art, which, when duly attended to, enriches the picture with a fulness of ideas adding to its value. I may further add relative to this principle, that our large towns are being overdone with spires; and as a single building, Lichfield Cathedral is a great mistake. It is not the fault of our architects, who have taste and ability enough to give us variety. It is the fault of their employers.

A few more truths may be noticed before concluding the great principle of selection.

4.—Nature is full of detail. So much so, that one picture in three or four years of an Artist's life, would scarcely bring his subject to truth as it is seen. The mountain waves of the sea are seen to be divided or made up of smaller waves, which are again made up of still smaller waves, till the eye can scarcely follow the minute divisions of the turbulent element, and this is observable in lake and river waters, which at first view, and to the general eye seem calm undisturbed surfaces. The detail and play of lights and shadows on leaves of trees near or at a moderate distance are so infinite, that the photograph alone can give the true effect of nature. Again, the texture of rocks, ground, grass, roads, animals, manufactured

articles, and numerous objects is so minute to vision that any attempt to give them by niggling or stippling them in is ridiculous, quite out of the question. Methods are therefore resorted to, which give all the truth required, better, more mind-like, and truthful as regards impressions, than any amount of labour could give. This is done by a spread out short brush, by dragging a rather dry brush, or not full, quickly over the surface of the paper, so as to give all the effect of granulated minutiæ, with little labour but with sufficient truth for all purposes of art.

5.—On going to nature for selection, if you have the slightest spark of the fire of true genius about you, the first impression you will perceive will be, that there has been a mind there before you; the incomparable, ever present, ever permanent, yet ever changing mind of God. If you don't see this mind prevalent in the subject before you, but see nothing but form in brick, stone, and mortar, you had better go home and make up your mind to devote yourself to some other walk of life more congenial to your incapabilities. To the truly gifted Artist, this ever imbuing Intelligence is spreading picture after picture of intellectual beauty, from early morn to sombre night. Take such a town as Thun, or Unterseen, or one of the quaint old-fashioned towns on the Rhine. How solemn is the break of day. The distant snowy summits shew even then a tolerable sharp outline to the gray of dawn, and even so early as that, the

white snow of earth, is darker or dimmer than the early light of Heaven. The lower regions of the hills are in the most solemn indistinct repose, with distinctions and detail just visible, mingled with the softest dewy atmosphere, yet unilluminated by the God of day. The old town looks gray and quiet, its towers and spires are not so much darker than the distance, save some eaves, and crenated battlements, and old wooden ridges, give a depth ensuring the nearness of the objects. All is quiet, still, and full of mystery. But this quiet has its passages of that never ceasing motion, which distinguishes nature in every mood of its restless existence. There are some trading barges by the quay, one of which has to depart early, and a light is visible in the cabin window, and some smoke is ascending from the diminutive chimney. Both light and smoke are reflected in the apparently quiet water, which is not quiet; for the lights tremble about, now close to the cabin window, now to your very feet. Another light from the morning star is glittering on the lake, and though the cause is millions of miles away, such is the power of nature, it is far more brilliant than the cabin light, which is close to. Some masts mingle with the old gables and towers, but a dreamy connection of unity and indistinctness pervades the whole, which takes possession of the soul as poetry, not bricks, stones, wood, and plaster. Now it is this impression of the *mind* of nature over the scene, that is to be the painter's object. Not the mere delineation of the stones, and quays, and boats; these he can

see anywhere. They are the accidental subject on which this mind rests. The Deity dwells in thought in that scene. Embody it in all its mysterious wanderings and passages, and a work will be produced worthy of the name of art. Attempt it. Try to give the impression of the whole, as your eye wandered over its quiet solemnity. If you will only try to do it, and go on working from mind, which has its foundation in nature, you will succeed.

If this solemn twilight be intended for a picture, not a moment must be lost in sketching, that can be done later in the day. The effect will not last above ten minutes, and may never be the same again. In this ten minutes, or little more, another picture has arisen altogether different in colour and effect. Fleecy clouds high in the heavens have become illuminated with rosy light. The tops of snowy peaks are gleaming with rich vermilion glories, objects are more distinct, though still immersed in morning unillumined air, the brilliant star has retired before the coming day, and anon, streak after streak of richest hues stretch amongst the mountains: hill, cloud, and valley, rejoicing in a very revelry of intermingled colours, delicate shadows, and lights of such intensity, no painter can hope to imitate. Every quarter of an hour produces a new picture, a new effect, to follow which, or attempt a description of, would fill a volume. As noon advances, nature will have assumed a brilliancy of light it rarely exceeds, and if the painter will only take care

to select a tolerable elevation for his view, which he ought generally to do, it gives command, dignity, and space in a picture which the eye loves; he will see what a glorious thing earth is bathed in the grandeur of a lightsome day. One thing will impress his attention, that edges and shadows have become more defined and sharper. At noon, nothing can be clearer or firmer than near sun shadows, and when brought into the foreground of a picture, in the part nearest the eye, they give an intensity of effect, which the eye recognizes as truth, and delights in the efficient interpretation of it. In all this brilliance of light, it must be remembered the atmosphere is still there; as it is never absent in nature, it must never be absent from the picture.

So rich are the ever varying effects of nature, that the Artist may make a dozen pictures in one day, all widely different in colour, light and shade, and distribution of changing effects; and all from the same spot, and the same outline of the subject. If a summer's day, as the afternoon proceeds, it is not unlikely that portentous clouds may rise at first in such brilliance, tier above tier, and gathering up in the heavens, every ten minutes, being a different study, that the flash of nature's voice, and the darkness, and vivid standing out of the gray towers, and the mingling of rocks and mountain summits with cloud and smoky mist, may make a picture worth a life-time to execute; and as the storm rolls away into distance, again, study after study of cloud, forms, and effects, pass before the

astonished gaze, till a solemn quietness tells of nature's trouble being over; and the wet trees glisten in a breaking sun, and the wet roads reflect all living things, and a calm blue rests in the heavens, and the quiet of evening begins to tempt nature's songsters to renew their inimitable melodies, and the cattle graze in peace and sunshine, and all this happiness can be expressed in poetry and art, claiming the privilege that God gives them of preaching in living sermons of HIS power, wisdom, and goodness.

The keen eye of the Artist will observe that in the darkest regions of storm-thunder, and the still darker solemnities of night, the clouds never lose their transparency. In every effect of nature the atmosphere is penetrable, and should be equally so in art.

To follow the closing day to its heavenly wonders, from sun-set magnificence to twilight dreaminess, or to attempt any description of those spiritual effects, the most lovely and mysterious nature offers, namely, back sun-sets, that is, the Artist turning his back to the sun, and taking his view with the illumined portion of objects before him, would require page after page. They are better left to the sublime language of poetry, the marvellous powers of art, and the deeply sensitive impressions of the entranced soul's admiration in the ever varying riches of sun-set and twilight beauties.

This sketch of effects is only introduced to shew the fulness and abundance of nature's offers

to the Artist in selection of effect. When this mind power of Heaven is well added to a good selection of form, guided by the principles formerly laid down, and executed with a masterly hand, with an apparent mystery of touch, and a power of effect in colour which must especially be aimed at, a work of mind and beauty will be produced worthy a name. May I add, if anything, over do your work in colour. First, it will fade a little, secondly, it will probably be hung further from the eye than it was painted, and therefore will require it, and lastly, it is sure to meet with more general admiration. To be a fine colourist is a rare thing. Turner and Havell have been thus far the finest exponents of this great principle of nature's grandeur in landscape effects.

Before closing this important subject, it should be remembered, that the picturesque and the principle of selection are subjects that can be learnt, acquired, more than any other. An amateur or connoisseur can master these accomplishments in theory, so as to be as well acquainted with them as an Artist. At the same time, there is a wide difference in the artistic mind and education bearing on these important foundations of a good picture. Some Artists have a fine taste for the picturesque, and some are very deficient. Turner will probably never be excelled in all time for his exquisite feeling for this principle. Harding, Havell, and Stansfield, were always perfect in selection, which means the best possible view, containing the largest amount of beauties of form, the Artist and

the subject is capable of, and relates only to form. There are Artists now living, ranking justly high in their profession, who have scarcely any development of the organ of selection, who are, nevertheless, perfection in aerial perspective, good in manipulation and subdued colouring, and are properly esteemed for those qualities. Nothing gives a picture such fascinating power to all observers, learned or unlearned, as a good selection and highly picturesque character. May I be allowed to observe, that all accomplishments in art, whether of selection, sentiment, drawing, light, shadow, colour, or execution, are inherent in degree in all mankind, even in the most uneducated observer; but in the Artist these high principles are so strong, that he is compelled to express the fulness of his heart in production, and thus fulfils the destiny intended for him by the all-wise distribution of the minds of earth, who thus contribute to the world's enjoyment, improvement, and happiness.

6.—An experience of more than thirty years, in an official position in the management of exhibitions, has led me to the conclusion, that much good might be done to art, and the Artist's sales materially increased, had gentlemen of wealth, who are willing to buy, knowledge and confidence, that they were purchasing good works, which would be a credit to their judgment when hung on their walls. For want of this acquaintance with art, which every gentleman ought to possess, they

either refrain from buying, or being ashamed to ask advice, they buy a picture which may please their eye or taste, but which may be utterly worthless in the eyes of a judge of pictures; or, as a last resource, they go to a respectable dealer, whose character is at stake, and where they may procure a good work by paying handsomely for it, in many instances double the price they could have got it for direct from the Artist. This knowledge of art is of great pecuniary value to many, and many gentlemen make large sums of money by selling and changing. I know of one merchant who is said to make more annually by his high and sound judgment of art than he does by his merchandize; as gentlemen know if they get a work out of his collection that it will be "quality," and they pride themselves in saying it is from Mr. So and So's gallery. I have known a gentleman buy a picture in an Exhibition for £80, and sell it immediately for £200. And a shrewd buyer will spend his money so that his purchases will increase yearly in money value. A respectable dealer is always safe. But there are both advantages and evils in the system of these middle men. They claim as two advantages that they keep up, and in fact, push up the price of pictures, and increase their sale, as many would not trust themselves to buy except through their hands. In both these circumstances there is truth, especially the first. The evils connected with the system are, that a particular Artist is selected, whose works are run up to a fictitious value, far above their intrinsic

worth as pictures in the general market, and far above what they will fetch at a future time, when years have sobered down this artificial excitement, the effervescence of the moment, and the works take their place in the general mass of the world's productions. Again, a vast amount of injustice is done to numerous Artists who are of equal ability, and whose works will at a future day perhaps fetch more than the dealer's *protege*, but who has not been fortunate enough to mount the dealer's ladder, but is left to plod on in his quiet way, getting about £10 for every picture where the other gets £100, or perhaps £200, each work being of equal value in pictorial merit.

Works of deceased Artists are run up in the same way. Small drawings which the Artist never got above £10 for when living, are now fetching £100; and buyers will find that in less than twenty years, they will return to their original value or less.

Mingling amongst good pictures is like mingling in good society. In one case the manners, bearing, and language are improved, in the other the eye and taste are improved.

The principles laid down in this work, will do something towards those first lessons in art, which are indispensible towards a good judgment. Afterwards, attention must be drawn to the following.

7.—A picture may have perfect aerial and linear perspective, and be worthless. A picture

may have the most perfect drawing, and be worthless. It may have the most brilliant or gorgeous colouring, high finish, be beautifully smooth, and most fascinating to the eye, yet be worthless. It may have dash, and a masterly freedom, or be generally good in texture, and be worthless. It may have all the above, yet be inferior in manipulation, for high finish does not necessarily mean good artistic handling.

These apparent paradoxes require some explanation. It appears by the above summary, that all these valuable and distinct merits in a picture are separate and independent of each other, though all are necessary to a perfect whole. Good aerial and linear perspective are often seen in subjects badly selected, and faulty in picturesque arrangements, in fact, with scarcely any other merit in them, bad in colour, bad in handling, bad in texture and repose. Again, a picture may be perfect in drawing, as regards truth of form, but be so hard in outline, everything made out so clear, probably ruled, that the eye rejects the whole as "not art," but A PLAN of masonry and other detail. It may have no artistic merit or value in it. Colouring is the most fruitful source of error and worthlessness a spectator can conceive; nothing is easier than laying on unmeaning colour, without reference to nature, without science in knowledge of primaries and complementaries, and without that careful study of nature's colouring, which is always under the influence of atmospheric effect. Smoothness, which many are so strangely influenced by, is

about the most doubtful merit a picture can possess. Many of the old Dutch and Flemish masters were justly admired for this principle of art, but none of them ever equalled a Birmingham tea tray.*

High finish, like other principles, only adds to the merit or value of a picture as it interprets all the other requisites of a high class work. Finish may be nothing more than useless labour; done by a master mind it will always have its admirers and value, but it may belong to bad drawing, bad colouring, &c., and the work may have no other merit; and again, where for the mere sake of ostentatious labour, days have been spent where hours by a clever hand would have expressed things better, connoisseurs should be careful how far they may be deceived by this fascinating but doubtful principle.

On the opposite scale of manipulation are dash and freedom, which require equal caution on the part of buyers. As principles in themselves, they are only valuable as expressing with ease and facility the higher truths of art. The scene painter, the decorator, and house painter, often acquire these merits in a higher degree than Artists.

* To shew the worthlessness of this principle of smoothness, which the illiterate observer so much admires, I may state that I once saw the centre, or pictorial part of a Birmingham tea tray, elegantly framed, and hung for sale in a Provincial Exhibition. The cost of the tray may have been about 10s. It was priced £15, and shews how useful general knowledge is to buyers, as this tray having been copied from some tolerably good picture (which was no doubt a pattern for numbers of them), had qualities of composition, light and shade, and aerial perspective of a high order.

Manipulation is the Artist's mode of expressing the principles of art, and his own ideas and conceptions of nature's appearances. It is perhaps more a gift than anything else. A good style of execution is most valuable in a picture. As nature gives every one different features, and different modes of thought, and even of sight or seeing nature, so it will give every Artist an original touch and method of interpretation, if he will only rely on himself and not be copying the touch or style of other Artists. Frequent viewing of the works of our chief masters, will soon enable a gentleman to know their peculiar touch and mode of expression, and to detect any plagiarism of other men's brains.

A few more hints may be necessary before closing this part of the subject. Transparency and opaqueness, are two important subjects in art. The great value of water colours is their capability of giving the transparency of the atmosphere and distance with greater truth to nature than in oil. In oil to obtain transparency, requires thinness, by adding much of the vehicle, which is destructive of its durability as transparency. Opaqueness is inadmissible in water colours, and can scarcely be obtained except by body colours. In oil it is only admissible in lights. In shadows and in the shaded sides of objects more of the vehicle may be employed without injury, and the desired transparency obtained.

8.—Texture embraces everything in nature.

It is its outward appearance to the eye, which outward appearance is all that an Artist has to do with. The chemical nature of the object is not in his province. The English School is great in this valuable principle. The texture of the wool of sheep, by T. S. Cooper, R.A., and the glossy smooth surface of the horse, by Landseer, and our local Artist Huggins, are amongst the triumphs of art, which will probably never be surpassed; and Stanfield was unequalled in water in motion. The textures of animals, as of hares, deer, &c., are imitated to perfection; and in manufactured articles, as of silks, velvet, cloth, &c., our painters cannot be excelled. The semi-transparency of the human hand and face, are amongst the finest studies of English portrait painters of eminence, of whom England has just cause to be proud.

The touch of a picture is an important thing. It must entirely be guided by the distance the picture is to be viewed. A touch that may be visible two yards off, may be quite invisible twenty yards off, and therefore useless, lost labour. Painters have often found this to their remorse, that the beautiful manipulation in artistic touches, which they had indulged in with such delight and care in their studios, were all lost, unseen, and unappreciated, when unfortunately hung high in an Exhibition. A scene painter is well acquainted with this principle, and touches seen near, which appear unmeaning daubs, at the distance they are seen, resolve themselves into the true artistic intention.

9.—It must be remembered the lights of nature cannot be imitated. All we can do is to give a representation, as near in the relative proportions of light and shade, as our materials will let us. The highest light of white paint being taken as the means of representing the highest lights of nature, we gradate from that to shadows as nature does, ours being just such a representation as we might expect on an opaque body ninety-five millions of miles from the sun. The eye however recognizes it as truth. Any attempt to force a surreptitious light in a picture by extravagance will only end in disappointment, as it will be at the expense of truth; the relative degrees cannot be retained between the lights and shadows of nature. It is said that light pictures sell better in an Exhibition, but many prefer deep toned pictures as more poetical.

Nothing requires more caution than the investment of capital in the old masters. Nine-tenths of them are perishing, and not worth a hundred years purchase, and every picture by the most esteemed of them is known. No gentleman ought to look at them, whatever gallery they are stated to be from, without obtaining the opinion of a sound authority. No greater scoundrelism in this world exists than is known to be in operation in the manufacturing of "old masters." Not only in Rome and other Italian towns, but in England, old masters are manufactured by hundreds. They can be made two or three hundred years old in less than a week. I knew a young gentleman in Liverpool, who

having come into ample means, fancied he was a judge of pictures. Without seeking advice he built a handsome gallery adjoining his mansion, and began buying. As was likely he soon fell into the hands of unprincipled picture manufacturers. Having laid out several thousand pounds, and filled his gallery to repletion, I received an invitation to come and luxuriate in his treasures. My heart sank within me on entering, but I remained silent while my host shewed his Guidos, Velasquezs, Murillos, Rembrandts, and so on through a long list of ancient names. At length he began to remark on my silence, when I asked him how many pictures he had in his gallery, and he said 300. After the most careful examination I told him he had only two genuine pictures in the whole collection, and that if he had taken advice *before* he bought them instead of after, he might have saved some thousands of pounds. After my opinion, he sent for a gentleman of sound judgment who gave the same testimony. The poor fellow took it deeply to heart. He packed them all off to fetch what they would, destroyed his gallery, took to drinking, and killed himself in two years, a prey to remorse, by dabbling in old masters, manufactured by unprincipled vagabonds whom the law ought to get hold of and punish.

Old masters, especially of the Spanish School, are manufactured in South America, and imported to Liverpool, as I have seen instances of. Not many years ago a nobleman sent for me to see the purchases he had made during a long sojourn in

Rome, and I told him in a moment there was not one genuine picture amongst them, they were all worthless, and some of them were large gallery pictures.

Good pictures are often ruined for want of a little knowledge how to preserve them. Much injury is done to them by ignorant servants left in charge of them, having no special instructions from their owners.

Nothing injures pictures so much as damp, either as water applied to them, or damp foggy air having access to them. A whole gallery of valuable pictures has been known to have been irrecoverably injured, by a servant woman putting the windows all open and and leaving them so, through a damp foggy day. On such days the windows ought to be kept closed, and good fires kept in the gallery. Pictures receive as much injury from the back as from the front. They are generally hung leaning at a certain angle from the wall, though in many mansions this is not required. The consequence is, in time a quantity of dust accumulates at the back, which retains any moisture floating in the atmosphere, and rots the canvas. Every picture, oil or water, should be covered at the back with an oil-cloth, the oiled side outside, and not touching the picture, fastened to the frame or stretcher, but not with paste.

Pictures are much injured by servants wiping the dust off them, as they do furniture. Rubbing the dust off a picture with a duster is so much friction applied to the surface, and as no

material on this earth (except precious stones) is so hard but it will give way to friction, what chance has such frail materials as canvas and paint, against such a constant scrubbing. I had a valuable family portrait sent me to examine some time ago, to give my advice about it being cleaned, and I saw in a moment it wanted no cleaning, an old housekeeper had wiped it daily for twenty years, and literally worn it to the canvas by friction. A picture should certainly have the dust cleaned from it, but once in two or three months will do, with some fine cotton wool, or an old soft silk handkerchief, which has been often washed. No gentleman ought to attempt to wash, clean, or varnish a picture. Experienced artists, or respectable picture cleaners ought to be applied to. I might almost venture to say that one half the pictures in the world have been, if not ruined, injured by charlatans or ignorant persons, who thought they knew something, but did not, dabbling in solvents and powerful mediums they did not know how to manipulate. I knew of a splendid specimen of "Netcher" being sent to a person who professed to know something of picture cleaning, and finding he could not clean it, he painted it all over according to his ideas of art. The owner thought his picture was ruined, but knowledge soon cleared off the rubbish and restored it to its pristine beauty.

Artists in general are little acquainted with science or chemistry. Something must be done to make the sublime efforts of genius in art more permanent than they have hitherto been. More

durable materials must be substituted for canvas and paper. It is not only a duty to art itself, and an interest to its professors, but it is common honesty to buyers, that the works they prize and give such large sums for, should go to their posterity as valuable as any other property.

10.—There are some facts about the atmosphere, which appear either to have been unobserved, or not to have been commented on by any writer that I am aware of. The air does not move horizontally along the earth's surface. It has a declination towards the earth, sometimes of an angle of 30°, more or less, according to the speed of the wind. How far this knowledge may affect the disposition of sails of vessels, for their advantage in speed, has perhaps not been considered.

Attention to the distance which the smoke of large towns travelled, and were seen, was early observed and left on record. Gilbert White in his "Natural History of Selbourne," mentions the smoke of London passing over that town, which was fifty miles off. First, it was known by its smell of coal-smoke, secondly, it was seen coming, thirdly, it never was seen except when the wind was direct between London and Selbourne, which would be north-east. The smoke of a large town can be seen 100 miles off. I have frequently seen Chester thick with the smoke of Liverpool. The smoke from Manchester and the manufacturing districts can be seen from the high lands east of Lancaster to be passing over Morecombe Bay,

dimming the sun at setting, and completly hiding Blackcombe, which would otherwise be visible. The smoke from the busy hives of East Lancashire and Yorkshire, when the wind is south-east, can be seen passing over Windermere and the Langdales; and this is certified by the fact, that first, it can be seen coming from that district, and secondly, only when the wind is that way, and thirdly, as evidence, when the wind brings this smoke over Windermere, with a south-east wind, all along the north-west of the lake a ridge of black soot accumulates, the result of the quantity that falls on the lake being driven by the wind across to the opposite side. It is generally considered that this falling soot enriches the land over which it passes, but I am not aware that land 50 or 100 miles round the manufacturing towns, is richer than in purer districts. I have not seen much green grass, trees, or fields of corn, in the black country.

CHAPTER IX.

1. Water Colour Skies. 2. Ornament. 3. Summary of Principles. 4. The Seventh Wave. 5. Diligence of Thought. 6. Reality in Art; and close of Part II.

1.—I have frequently been questioned as to the best method of painting large skies in water colours, especially where there is to be a perfectly smooth gradation, and where the colour has to change; as for instance, on a calm, light, sunny evening, when the beautiful blue above, will gradually change to nearly bright yellow, without any green appearing, and with that perfection of change which nature can give so beautifully without a spot being detected anywhere where this change takes place. The difficulty in water colours is to get that perfection of change in light and colour, with the loveliness and truth of nature, without brush marks, or spots of inconvenient darkness, and having to wash or paint over a paper surface of perhaps five or six feet, the nature of the material causing it to dry so quickly, that the Artist, however dexterous in handling his brush, will find it difficult to get one gradation attended to at one side of the picture before the other will be getting dry, and if once dry before that gradation is effected a mark is the result, requiring no end of trouble and care afterwards.

To succeed in this, a sheet of paper sufficiently strong not to cockle, and which must not be pasted

to a board, must be used. The intention of what is to be produced must be well fixed in the mind, nothing being required from accident. Flat brushes must be used, and a sufficient quantity of colour ready, so that no time shall be lost, as dexterity and quickness are of great importance. Put a smooth wet cloth on your drawing board, and let it remain, put the paper on this. Then wet the paper all over with water. Now take your blue, very weak, and have plenty of it, and as soon as the paper gets that much dry, that no wet appears anywhere, but only a dampness to the touch, lay on your blue, rapidly drawing the colour away from the spot just passed over, and not backwards and forwards, and having covered the space as far down as the intended blue is to go, with a wet brush which is to be ready, soften this blue into nothing, taking care your brush is not too wet, or the wet will run back into the blue, causing a blur which will be very troublesome, draw the softened colour down on to the paper to avoid this. As soon as this is sufficiently dry, that no wet is visible, either repeat this or commence with the yellow softening upwards into the blue, and where the two meet, a light tint of vermilion, or light red, between the blue and the yellow, will give the true appearance of nature without green, which is only seen in rare effects. This process must be repeated again and again, perhaps a dozen times or more, the dampness of the paper keeping it clear of marks, and care must be taken never to press with the brush on the paper, which may bring the first paintings off, much to

the Artist's annoyance, and by always drawing the colour brush, or softening brush away from the colour, you thereby escape leaving the surface too wet, as its settling into the surrounding space, may leave an unevenness to be avoided. With knowledge and care a sky, six feet in width, may thus, by repeated washes, be obtained with all the clearness, beauty of gradation, purity of colour, and perfection of concavity and aerial perspective, which art is capable of.

If there be any slight deviations or irregularities visible towards or at the close (till which time they should not be taken any notice of,) a little stippling of small touches and thin colour in the light parts requiring it, will set those right, and for dark errors, a little tender washing with a not very wet brush will set those right. In this advice I do not recommend any washing off of colour, which many Artists do, it clears the colour off the small upper surfaces of the paper, leaving it in the small valleys, causing a granulated appearance, which is not seen in the sky, and is destructive of its beautifully smooth appearance.

2.—Ornament is one of the most magnificent blessings showered on the human sight and mind. God, in the overflowing goodness of his purposes, and the fulness of his benevolence to man, has spread this principle over all creation. Man must follow up and avail himself of this gift, applying it to art, sculpture, architecture, and manufactures as his educated mind may dictate.

We see this principle spread over the vastness of creation, in such profusion and evident intention, that we seem unaware of its value, till the thought of its absence would tell us of what we were deprived.

The starry heavens were not intended for ornament to us, but they are.

Life in the depths of the ocean, from the absence of light, might have been imagined faint in colour, whatever form it might assume, but here in those silent and dim recesses of nature, the treasures of which man is only beginning to be acquainted with, we find her revelling in such brilliance of colour, and singularity of lovely forms and ornament, as to eclipse even the most gorgeous Flora of the planet. Instance the magnificent "Haliotis," whose singular patterns and gem-like colours of every hue, dazzle the eye to look at. Instance also that singularly ornamented shell, the "Turbo," and the beautifully pencilled and waved patterns of the "Scapheliæ Undulata" and Ammonites. Of the birds, the selection is so numerous that it will be sufficient to name the "Tanagar," with its splendour of the primitive colours, and the singularly striped ornamented breasts of the "Formicarinæ." Of those favorites of nature, butterflies, we may notice the "Morpho Cypris," as a miracle of beauty in ornament.

The wonderful forms of flowers, the variety and beauty of their leaves, tendrils, and united conformation, have been sources of ornamentation in all time of art, but not one-thousandth part of their

suggestions has been made available. Architects and manufacturers of all kinds might enrich their forms, if not with more beauty, at least with greater variety of exquisite forms than they do. For nearly 3000 years, architects have used the same leaves and patterns, whilst nature was offering them treasures innumerable for choice. The elegant Sarracēniæ Drummondi, and the beautiful Crinum Undulatum from South America, offer forms as well adapted as the Acanthus to the Capitols of Pillars. What can be more lovely as pattern-flowers, than the Banksia Occidentalis, the marvellous Strelitzia Reginæ, the richly coloured Brownæa Ariza, and Trichoplia Coccinea, and the gorgeous Hibiscus?

Again with what elegance, variety and beauty, nature strews our paths through the fields, by mountain gorges, and murmuring rivulets. At every step some pattern of loveliness, peeps forth asking for admission and use. This wild profusion of earth's brightest gems, is not given without a purpose. They seem more clearly made for our pleasure in sight and use in ornament than any other forms, though they have probably medical properties, and are also to provide food for insects. Much has been done by our botanists to bring these rich offerings of nature into utility, but much yet remains to be done.*

*In the course of several rambles in the gorges of the Berwins near Llandrillo by Corwen, and by the small stream of the Ceidiog and adjacent meadows, I found several specimens of wild flowers, not chronicled in Mrs. Lowdon's beautiful work. The neighbourhood is rich in British wild flowers.

Commencing with historic times, after the message which Moses delivered to the children of Israel, it is said, "And when the people heard these tidings, they mourned, and no man put on his ornaments." Exodus, c. xxxiii. v. 4. And in the building of the Temple, it is written, "And he GARNISHED the house with precious stones for beauty." 2 Chronicles, c. iii. v. 6. In the description of Tyrus it is written, "Fine linen with *broidered* work from Egypt, and blue and purple from the isles of Elishah." Ezekiel, c. xxvii. v. 7.

This thirst for mind illustration in ornament was confined to no nation or country, as seen in the sculptured and highly ornamental pillars of Karnac, and the obelisks of Egypt. The monuments of ancient time, shew us such beauty and power in ornament, that it is questionable whether any improvement has taken place for 3000 years. The marvellous temples and rock caves of India, shew such exquisite beauty of ornament; the wonder is where they got their ideas from. Nothing in medieval or modern times has surpassed the pillars and rooves of Vihara, and the Chaitva cave, or the wondrous ornamental columns of the Lanka.* The marvellous sculptured ceilings and doors of the Chandravati are inimitable in their beauty and fitness of style and subject, to the purpose they were intended to ornament.† As is also that ancient and elaborate Gateway of Sanchi Tope, near Bilsha, supposed to have been erected 250 B.C.

* James Ferguson's Rock-cut Temples of India.

† Col. Tod's India.

The gorgeous and elaborate altars* of the early Christian Roman period, the arabesques of Raphæl, and the rich legacies of the mediæval Gothic, all shew this passion for the beautiful in decoration of form.

In the earliest dawn of painting and architecture, we find the artistic mind replete with this divine manifestation of beauty. In those noble, but early efforts of architecture, the palaces of Nimroud and Khorsabad,† we find the architects already availing themselves of the forms of nature for patterns of ornaments, as the Pectenidæ, which forms are ever the true and safest guide to beauty. The sculptures of the Assyrian Kings, the ornaments of their chariots, trappings of horses, and costumes, are singularly elaborate with the richest and most chaste ornaments, shewing the advanced state of civilization nearly 4,000 years ago, not forgetting the sculptured ornamental pavements of Konyunjik.

In the Greek period, the ornaments§ on the western acroterium of the Temple of Jupiter Panhellenius in Ægina, will probably never be equalled in classic beauty of design.

The early painters soon availed themselves of this important contribution to pictorial beauty, and brought it to a perfection which has never been surpassed. In the admirable collection of old masters at the Royal Institution at Liverpool, is a picture by "Gentile D'Fabriani," (who flourished between the dates of 1332 to 1412,) which,

* D'Agincourt. † Layard. § C. R. Cockerell.

for magnificent and elaborate ornament and easy art-like draperies, will bear comparison with any pictures of modern times. Some of the pictures of Paul Veronese and Tintoretto, are flooded with this valuable addition to the interest of a painting.

The wide-spread influence of this principle in every form of manufacture, in our dress, our houses, our furniture, our books, our ships, in iron, and all other metals, in wood, the carving of which has so long been rich in this principle, and other articles of commerce and domestic use, shew the utility of ornament as a universal, never ceasing blessing, provided by nature for our admiration and enjoyment.

Those who wish to pursue this subject further, will find there are principles belonging to it, which are universal, have been in operation in all time, but apparently subject to taste only. I am not aware of any code of laws treating on ornament. Whatever they may be, nature will be their foundation. There are principles of contrast, continuation, repetition, convolution, representation, imitation, grace, fitness, belonging to the object ornamented. You would not adorn a church with ornaments of guns and swords; there must be a connecting sentiment between the ornament and the object ornamented.

An elaborate work on this subject is wanted in our literature, it would be exceedingly valuable to a large section of Artists, who may be grouped into painters, architects, manufacturers of all kinds, decorators, &c. To do it justice would require

years of labour, travel, and research, the compensation for which is very doubtful.

3.—This brief summary of principles, is only given as a framework of elementary instruction. There are thousands of dispositions of form, light, shadow, colour, action, effect, and sentiment, which the advanced painter will embody, simply from the abundance of his talent and resources.

What are recorded here are modes of form, either to be avoided, or an inclination to which are safe; and the hints on light, shade, and colour, are partly from the standard works of nearly all good masters, and partly the experience of personal observation.

To paint by rule would be bad indeed, but to paint without knowledge is worse. Nothing stands the test of time and the approbation of the critic so much as the work of a man learned in his art. He is strictly true in principles, but he hides them; he even hides his touch, so much so, that on approaching very near, you can scarcely make out what it is, but at a proper distance it resolves itself into its own high elements of beauty, as a part of a well arranged, well sustained whole; no touch, object or colour of which will bear separating from the rest.

If you despise principles and think you can do what you like, set yourself in a valley, with hills of equal height on each side; take a central view, the hills commencing at each side of the picture at equal distances from the top, let them meet in the

valley in the centre of the picture; in this centre let there be a small village, with a church and spire rising up into the exact centre of the picture, let a small stream with perfectly straight banks, come almost vertically down from the village to the foreground. On each side of the stream put a boat with a mast, the two masts rising the same height, one at each side of the church-spire, and at equal distances from it; in the near part of the stream, put a small boat with one figure in; exactly under the church spire, put two trees of equal magnitude and alike in shape, one at each side of the stream, in the meadows, and at equal distances from the masts. You now have a picture wanting in all the essentials of art as regards the picturesque in form, yet it may be a true representation. The very same objects with taste and knowledge, may be made into a good picture. It will be said no person, let alone an Artist, would take such a view, or place his objects in such positions; perhaps not, though I have frequently seen drawings very little better; but I have another motive in bringing this absurd picture before you, which is to shew the complete independence of one principle from another, how it requires all to be perfect, and how the absence of knowledge in one may be destructive of the merit and value of a picture, which otherwise may have many good qualities. This absurd arrangement of the forms and objects in the picture may remain as it is, but be accompanied by most lovely sentiment, as for instance, a sun-set up the valley, the red sun just dipping behind the

village church, and catching gleams of golden lights, tipping the rocks or the hills on each side, and all the richness of tone, and minglings of evening shadows, and reflections of glorious hues in the river may be there; but all is of poor purpose if form be bad; the picture may be perfect in light and shade, good in handling, &c., still all will be in vain if the subject is bad in arrangement. Therefore, the knowledge is invaluable which enables the young Artist to learn in a few hours what will keep him right, which may take him years of maudling in the mud of ignorance before he gets on to good safe ground if neglected.

4.—When will painters listen to the voice of God in nature, and learn wisdom from His suggestions? The waves of the sea come not to the shore in monotonous equality, wave after wave, they come in several inferior ones, and about every seventh wave comes a large one, a *principal*. The wind does not blow in one continued even blast in the wildest storm, it lulls, even goes into momentary repose, when suddenly comes a gust of tremendous power, which again dies away, till it is again repeated. It is the same with seasons, with the civilization of nations, with life itself, it goes in impulses, which mark eras and principal events. So it should be in art.

I have seen many large and elaborate pictures, landscapes, battle-pieces, and historical subjects, spoiled in grandeur of effect, without this attention to impulses amidst the multitude of objects; the

starting up of the seventh wave, the gust of wind, to mark an epoch, a moment of important grandeur of effect or subject. The more that is known of nature's modes of operations, the more true and grand will be the work founded on such knowledge, for there is a mysterious connection of principles running through nature and art in one continuous chain of endless harmony and perfection.

5.—Diligence in production of pictures has not so much to do with an Artist's progress in merit, as diligence in thought. In fact most Artists paint too much. They would paint better if they painted less. Painting is not like music in this respect; music, either vocal or instrumental, requires immense practice to attain proficiency. True painting is produced by thought, or the education of the mind; the painter endeavours to give on the canvas the impress within, either of his ideas of excellence, his observations of nature, or whatever state of mental energy he may be capable of, naturally or educationally.

Let an Artist go to nature for six months, occasionally seeing first-class galleries of pictures, but never doing a stroke of work during that time, he will come back a better painter, quite another individual mentally, with more power of both mind and execution.

A first-class work will be rich and full in ideas, in thoughts of well considered passages, in recollections and observations of the infinitely minute beauties, seen in nature daily. It will

attract the eye and rivet the attention throughout, for every portion will have a meaning, not of paint, which it is, but of thought which it was, before paint expressed it.

Whilst every part will be subservient to a well considered whole, the most subordinate parts, those where scarcely anything can be made out, are as indispensable as repose, as the most elaborate principal. A cultivated mind leaves its impress on the canvas. The picture has, as a production, its duty to do while it exists. With necessary care for such frail materials it may radiate gleams of constant beauty, fill the sight with beams of nature's loveliness, educate both eye and thought; a thing of joy and admiration for a thousand years, and to myriads of human beings rejoicing in its excellent glories.

6.—Reality in art, will always be reality and nothing more. It may unite pomp and circumstance, and grand assemblages of historic interest, and give us the perfection of drawing, the luxury of colour, the most classical and severe arrangements of form, and the most marvellous handling in truth of appearance to the eye, as regards similitude; but it will still be a work which the mind has wrought through sight. What art wants is a work which the sight has wrought through mind.

It is the poetic ideal, the imaginative, the mind comprehensions, the soul seeings into the revelations of God's expressions of HIS thoughts, whose eternal resources of beauty and sentiment, whilst

they surround us with such grandeur of morning and evening solemnities, still have their foundation in natural and imitative truths, that will alone lead art to its highest pinnacle of poetic power and sublimity.

The poet may rival us in the glorious imagery of description of the passions of the Earth's refulgence, as shewn in man, and in the deep mind sentiment of effects in nature; but art is capable of giving the most mysterious combinations, and dreamy visions God surrounds us with, or man conceives, with a power and grandeur of truth alone given to that magnificent intention and expression of the purpose of Deity for the edification, gratification, and delight of the intellectual of the earth—the art of painting.

PART III.

SPECULATIVE COSMOLOGY RESUMED.

CHAPTER X.

1. Infinitude of Space and Infinity of Time. 2. Ocean. 3. Forms of the Fauna and Flora. 4. Instincts. 5. Training Animals. 6. Cruelty to Animals. 7. Work. 8. Evil—Goodness. 9. Star Wanderings. 10. Contrasts. 11. Equalizations.

1.—Nothing overwhelms human thought so much as infinitude of space and infinity of time. To state that this world was created only 6,000 years ago, and that it is shortly to come to an end, (the date has been many times fixed,) only shews those who entertain such ideas to be unacquainted with the clear and incontrovertible evidences of geology.

What are the advocates of a trifle of time like this to do with the eternity of the past and future? The infinitude of space is filled with life, in that mode and order that an allwise Intelligence has seen best.* Our planet bears about the same

*If our sun's light and heat are drawn from the planets, then planets are the sources of the light of the stars. Our sun does not shine for the mere glory of shining, and displaying its own magnificence; it shines for a purpose, to supply the system which sustains it, with its borrowed powers. The fact of the stars shining, shew that the effect results from the same planetary resources. Were the stars not

proportion to infinite creation, as a single grain of sand bears to all the sand on the surface of the globe. Even this is not truth, but given as a figure to awaken thought to our own insignificance in the immensity of created life. Even our sun, though it would fill all the space circumscribed by the orbit of the moon, is but a small centre of a system. Sirius, for instance, is stated to be many times larger than our sun, and from its appearance, as it is not our nearest neighbour, I believe it. We are sufficient unto ourselves, and our ideas and happiness are of course centred in our system; but I believe there to be far grander assemblages of suns and planets than ours, and probably far more magnificent developments of organic beings and mind. It is impossible we can ascribe to the Deity a limit of such powers as are revealed only on this earth or this planetary system. There may be existences in life, and mental capacities of far greater power in thought, action, and probably of personal beauty than we possess, for we can form no idea of the nearer approaches to the spirituality of the Deity, that may be created elsewhere; since God Himself is so immeasurably beyond all human and created intellect, that there is ample margin for far more elevated beings than dwell on this small planet.

2.—There is now two-thirds of the world

luminous, we should never see them. At their immense distance, it is their luminosity that causes the minute glitter we see. Their magnitude, if opaque bodies, would not make them visible.

ocean. This will not be so always. Vast continents, and what may become islands are now forming in the beds of the ocean, which in their due time, in the progress of the planet, will rise above its surface, and will teem with life and human beings as land does now. Such inferior organizations as fishes, cannot in the order of nature always occupy so large a space on this planet. There is no doubt the quantity of ocean is now necessary, and that in the early periods of the planet's existence, it was altogether covered by water, but it will give way to the higher beauties of land and its superior animals. It is impossible to conceive what changes may occur in a million of years, especially when the planet begins to decline to its original transition state of fusion or incandescence. At present it is far from its culminating period of existence.

3.—So vast is the variety of form in the Fauna and Flora of this planet, that it would seem to monopolize every conceivable idea of organic existence. Yet there can be no doubt, that the other planets of our system have different forms of animal and vegetable life. If we follow this up to its legitimate conclusion, we must suppose every planet of every system in the universe to have different forms, it is not likely there will be a single instance of a planet having the exact forms of this or any other. If this be true, how infinite and incomprehensible the power, fructification, and variety, in the intelligence of nature,

for we cannot dissent from the fact, however apparently insignificant, that this intelligence must have been at some time employed in designing and forming a daisy or a knat. They could not come of themselves, design, or form themselves; no being however minute in the Flora and Fauna of this or any other planet could create or form itself. All has been done by an infinite wisdom, with resources of forethought in power, fitness, utility, beauty, both of form and colour, design in intention to an end, and every requisite of continuation, and enjoyment of life it is capable of and gives.

Take for instance, the adaptation of the physical powers of the most delicate animals and plants, which float freely about at the bottom of the sea, with such a weight of water over them, just as they do in air. The Corine Pusilla, the Sertularia-filicula, and the sea plant Plocamium-coceineum, move as lightly and gracefully in their native element, as we might expect they would do in ether of the utmost rarity.

Reflections relating to the atomic theory, and theory of life, impress the mind with strong desires after knowledge of the union and connection of life and mind with matter. If we could ascertain the exact point, or any approach to the cause, which progresses or changes inorganic matter into organic life, we should then have attained an insight into the workings of the Divine Power, we are so strongly longing for. . Organic life must have its origin, and arise from the

inorganic. It returns to it. What mysterious power connects them? Motion has much to do with it. There is no cessation to this principle in life. It pervades all animate existence. Both Fauna and Flora are whilst living in constant atomic motion. In our own system it can be seen in operation by shutting the eyes and looking at the sun or other bright light through the eye-lids, when myriads of the most minute atoms will be seen in rapid motion, chiefly in circles, which are the forms nature universally aims at.

4.—One of the most extraordinary things in nature is its powers of attaching instinct for a purpose. This important and beneficent principle, affecting as it does so materially the welfare and happiness of man and animals, must be done through matter. For instance, a dog has an idea of property and protection, and also companionship to an owner. It appears to know which is its master's property, for it does not take cognizance of, or assume any police over the property of others. It obeys orders, anticipates its master's wishes, understands his language, what he says, as I could give numerous instances of, from personal knowledge, if required. If domestic fowls would not stop with man, but preferred a wild rambling life, it would be a serious loss to him. Animals might give us immense trouble, but for the principles of docility and obedience, which nature has purposely imbued them with. As for example, a few horses with their strength and powers of motion, might do a large amount of mischief and destruction, but

nature knowing, or foreseeing, its position as a helpmate to man, has made it the most docile of man's servants, evidently by intention, but the question is, by what means has it been accomplished? Use has not done it; for I don't think use will ever make a wolf a docile useful companion to man. What principle of nature's powers govern these and other powerful instincts in animals, so as to make them subservient to man's will, is a mystery not yet enquired into, a thing taken for granted as an every day occurrence. Why do flies wander about, and over streams and pools, to be food for fishes? Why do herrings shoal about our coasts in countless millions to be taken, and salmon come up our rivers to be caught? There is an intention in all these wise dispositions and instincts. There is an unknown principle in nature, which appears to have no connection with any powers of magnetism, electricity, or other cause yet known which leads to these benevolent principles.

5.—There has not been sufficient attention paid to training animals hitherto considered wild, useless, or partially so. The elephant would prove one of the most useful and powerful auxiliaries to man's daily labour, if attention was paid to his domestication, education, feeding, and comfort.* Left wild in the jungles of Ceylon, Borneo, India, and Africa, he is of course obliged to look after his own comforts and existence, but he is quite willing to be the servant of man, and do for him what no other animal can; the horse and camel

* Since writing the above, I find elephant ploughs are being made in this country for India.

being mere kittens in strength and intelligence to him. Man not only neglects the powers nature provides for him, but he abuses them, or at any rate takes a long time in discovering his advantages. I never read of the hunting and destruction of this noble intelligent animal, without thinking there is another good servant of man uselessly destroyed.* There is no reason to suppose elephants could not live or be employed in colder climates than those in which they at present inhabit. Geological researches inform us, that elephants formerly existed in colder climates than those in which they are at present found, even in Siberia, and it was used as an argument that such climates had then a warmer temperature, until it was discovered that the elephants found in a fossil state in colder climates, were covered with hair for warmth—as it would again do—for them, and even with man if he was to go about naked in cold regions. Nature would clothe him with hair in its fashion, just as it does the inferior animals.

6.—One of the most singular anomalies in nature, is the power given to man to brutalize and

* If you say their tusks are required as an article of commerce and manufacture as ornaments, I answer, that you don't increase the number of tusks by destroying the animal. If you had all the elephants in the world as domestic animals, and looked after their propagation and comfort, you would have ten times the amount of ivory you have; for tusks are as valuable when an elephant dies a natural death, as when destroyed by man's unfortunate propensity to destroy everything that has life. There is not a living organization on this Planet, but man takes a delight in depriving it of the life God has given it, even if he gets no advantage by it.

treat cruelly the animals God has given him for his use. Daily instances occur of the most base and degrading cruelty of man, which no other animals shew to each other. A brutal driver or owner of a horse will make it work for his profit, when he knows it is diseased, and undergoing the most excruciating pain. What astonishes me is, why does not it refuse to work, or, in being beaten to be made to work, why does not it seize its brutal tormentor and tear him to pieces. Nature appears to me to go too far in its subjection of animals to man. When I think of cruel creatures like these, and those worse than beasts, men who pluck fowls alive for a purely imaginative advantage, and those who bleed calves slowly, and at intervals, to get white veal, thereby making the flesh less nourishing and more indigestible, simply to please the morbid tastes, and uneducated eyes of a vitiated ignorant multitude; I ask myself this question: are these men, for I fear to say there are women also engaged in this abominable cruelty, as far as the poor fowls are concerned, are these people professing Christians; do they expect to go before their Maker to account for their actions in life? Have they any idea that they themselves will come to a death moment? Can they reflect on these things at that solemn time with any satisfaction? If there be justice in a living universal God, He will take full revenge for the cruelty inflicted on the poor, silent, powerless creatures He has with such benevolence placed in our power for our use. Let me with the utmost solemnity and

energy, a fellow-creature can urge to his fellow man, caution these people not to be trusting too much to a forgiving, redeeming God; they will find to their consternation, and when it is too late, there is no sin or cruelty man commits or inflicts in this life, but the all-powerful Intelligence of nature will have its vengeance on the inflictor. Woe be to the man who punishes needlessly any creature whom God has made! Even the mode of such punishment could be enlarged upon in the hardening of the heart, and insensibility to all the kindly affections of life in such cruel natures, but the perpetrators must not soothe their flintyhearts with the feeling that this only will be their fearful and deserved doom. Their punishment will be deep, sure, and eternal. I might sum up by saying, those who thus wilfully sin will be for ever isolated from all that is amiable, holy, truthful, lovely, good, and consequently happy, for all eternity. For how can a being so benevolent, loving, and just, as God, surround or draw to Himself creatures who have cruelly used and destroyed the animals given for man's use?

7.—God in His wide grandeur of liberty of action in life, has given to man the knowledge that such and such a mode of life, thought, and action, will lead to union with, or separation from His divine nature, and man takes his own course. God has left his fate with full knowledge in his own hands and life. Oh! let me live with Thee my God on Earth, and with Thee eternally let me

be employed by Thy wise will, and I am happy. All I wish is to be thy servant and do the work appointed to me. If I would be what I wish to be, I must work so to be. The happiness of man here and hereafter must be his own work. "Work out *your own* salvation" is the command of St. Paul to the Philippians, c. II. v. 12. God gives no wages where no work is done. He exacts the last stroke of the hammer. Give it, give it with energy, give it with power, God delights in it, for He has work to do by YOU, and He will reward the workman in whatever sphere he may be employed, with a richness and satisfaction which He alone can bestow.

It may be true, it may not be true, but I have thoughts at times, that that individual will alone inherit eternal life who works for it, and deserves it. I look around these accumulations of mankind on earth in its cities, and I see thousands of the most depraved, sinful, I was going to say beastly beings, but that I do what we call beasts an injustice by the comparison, for animals are virtue itself compared with some creatures called human; when I see such multitudes in human form, and also, that I should say so, in the form of lovely woman, who should be the personification of all the highest elegancies of the thoughts of God in form and mind, still through life wallowing in all wickedness of thought and action; I ask the question, and want it plainly answered, without tergiversation, of what use will immortality be to such utterly depraved beings? They can have no

occupation. Nothing in unison with their actions here. Separation from God and the good of earth is one verdict that may be passed on them. What are they to do? Immortality to the ignorant, debased multitudes we see around us with such painful feelings, could only be eternal misery. In all natural feelings and circumstances of life, I find God in His infinite kindness to His creations, soothes or shortens misery, whenever or wherever it exists. I do not think we shall find God a different being in a hereafter from what we find Him in the present life. He is too good, too benevolent to protract misery for mere punishment.

Avenues of patience, of light, and knowledge, of long waiting of the spiritual mind on man's depravity of both thought and action, are at work continuously round the moving multitudes on this planet. At length the Divine mind finds its impressions unattended to, even repulsed, and the withdrawal of life, both mortal and spiritual takes place, and the individual is from that moment a clod of the earth. "My spirit shall not always strive with man." Genesis, c. VI. v. 3. The moral influences of the Divine nature being rejected, opposed, and a persevering sinful course pursued, the end comes; light and help are withdrawn, intercourse with God ceases, and the individual is without the bounds of salvation. I cannot think a God of benevolence will punish the beings He has created eternally.

This idea seems to have been clearly prevalent in the mind of St. John in Revelations, c. II. v. 7.

"To him that *overcometh* will I give to eat of the tree of life; and v. 11. "He that overcometh shall not be hurt OF THE SECOND DEATH."

How soothing it is to the mind glowing with aspirations of immortality, to indulge the hopes of the panting soul, that the being who loves the fellow-creatures whom God has placed around us, who works for their happiness and comfort; who obeys the principles of right implanted in the heart of every living man; who cultivates the talents he will never fail to know he has within him; who walks with his master, as a servant willing and desirous to do his will on earth; who never lets the sun rise and set, without doing the work provided for him that day; such, my beloved fellow-beings, will not be forgotten by our Creator. He will in His own good-time call you to be fellow-workmen with Himself in conducting, creating, continuing, and producing myriads of unknown beauties and existencies, yet to be developed in the unknown power and grandeur of the eternal future.

The wonders of God's works, and man's works, that spread such lovely natural and mind inventions over this world, are a never ceasing supply of sources of devotional contemplation. All beauties of form in architecture, in organic life, in trees, in flowers, in ever varied forms of leaves, in sublime mountain ranges of rocks, in snow-capped heights, and the wild solemnity of an ocean horizon; all expand the thirsty soul's desires, till the wandering mind aspires to penetrate still away upward into

the vastness of space, to see all doings of the sublime mind elsewhere; that governs all, cherishes all, and shares with all: their loves, their enjoyments, their aspirations, their sufferings; and is with them in the hour of taking them to Himself, when time shall close the mortality of the good, the obedient, and the working of this earth.

When I witness the conduct of men, and the power of a God, I wonder at the infatuation of the one, and the long forbearing and goodness of the other. If there be a heaven for the industrious, the just, and good of earth, it will be a reward, a felicity, a partaking of the power and holiness of the Divine nature, which no human thought can comprehend; and if there be a casting out or deprivation of these sources of eternal happiness, it will be a fearful thing. The consequences at stake, individually, would lead one to expect every man to be struggling with every energy of life to secure the favour of God, and make sure work about the future; but, instead of this, three-fourths of the world, independent of any earthly creed, are bending every exertion of the daily strength given them to secure their eternal misery hereafter.

The atheist, who disbelieves the Being of a God, must shew us how everything came to be created, and continued so wisely and so well. When we see the wisdom and the power which has formed and sustains the planetary system; as for instance, in that forethought, which inclines the earth's pole in its orbit round the sun; the wonderful

mechanism of life, which the medical profession know to be so amazing in its intricacy of adaptations to an end; that power of nature that sees the necessities of light and heat, and creates them; that miracle of influence over matter, whereby its inert principles are transformed by a magic itself could not create, the benevolence that made life for enjoyment, whereby created beings become cognizant of the works of the Creator, and are gifted with faculties to see what Supreme Intelligence has done in the vastness of time and space; and both sight and mind, feel themselves surrounded with forms of beauty, of evidence of thought, either for utility or admiration; when the atheist has assented, as he must, that there is a power, wisdom, and goodness, connected with all these wonders of created existence, he has established the Deity which he disbelieves. If he says all things exist and are governed by universal laws, which could not be otherwise, who imposed or endued matter with those laws? The same analogies which run through all nature, support the same argument and principles, for the laws which govern society, were formed by the superior intelligence of nations, as those of creation are the work of the Divine Being.

8.—It is a melancholy truth, that there are occasional dark passages of life when we meet with beings of such utter depravity using the word to denote every evil it can convey relative to that under current of society which exists, that the

heart palpitates with emotion, that such creatures exist, and why?

Oh! do not think it a too daring expression to use towards the great God who superintends all things, but I ask Thee in impassioned feeling, Oh! God, my Creator, hear me. If Thou exist in thy greatness and goodness as I think Thou do'st, Why do'st thou permit evil? Why do'st Thou pain the good and benevolent of the earth by allowing sin at all? Stamped as it is with all sorts of cruelty, and utter indifference to all good, even to actual revelling in delight in all evil that can be invented and practised on this earth. Is it to continue? The mind trembles in its love of truth, holiness, perfection of character, kindness, and benevolence of attention to animate existence, and its ardent desire towards assimilating itself towards the mind of its Creator, to think that no power seems to loom in twilight distance to stay this wilderness of ungodly depravity, that spreads a continuous cloud of gloom over the few hearts of true stamina and love that dwell on this, I fear, inferior planet.

When I gaze on the vastness of creation, and know that we are only an outside speck of creative existence; I flatter myself, surely there is greater happiness and perfection in goodness in the eternal Heavens that surround us, and I sometimes think that the poor, sinful, degraded inhabitants of this world, are left in their insignificant poverty or helplessness of mind, and their cruel propensities, by the more brilliant attendants on

the mind of Deity that exist in superior constellations.

Yet, occasionally, but with fear and some misgivings, the mind rises in reflecting hope, that perhaps we are equal and the same as eternal life elsewhere. There are minds on this planet of such dignity, grandeur, expansion of thought, benevolence, learning, research; so full of love to God, and all HE has created, that the soul bounds with joy in meeting light with light, genius with companionship, purity of life with fellow uprightness, and all known to be the work of the great universal Intelligence, that creates and sustains all life and mind, on this and all other worlds according to their obedience and union with the Divine will.

9.—There is a strange feeling, indescribable in its intensity, in looking at the planets and stars on a brilliant night. One loses oneself, wandering in thought, and in dreamy forgetfulness the mind seems momentarily to have fled, and winged its way to some far off system, and dwelt amongst its wondrous tenants.

There are moments when the soul feels lost in outward space. Thought seems to be hovering in veritable luxury of sentiment over some bright star of heaven, far away from this tiny globe. It may be, that at such times the soul is absent from the body, floating mysteriously over some planet of Regulus or Aldebaran, or other gorgeous development of the great universe of life. We are yet unacquainted with the powers of nature that may

exist in higher organizations of life, or the future capabilities that may be in wait for us.

10.—Surely no systems, worlds, or varieties of the superior organized beings, if there be such, can exhibit such diversity of thought and propensities in life, as are shewn in the varieties of tastes and delights on this planet.

The poet, the artist, the lover of the beautiful in nature, who sees with rapture, adoration, and thankfulness, the manifestations of the mind of God, dwelling in all beauties of expression, in all glories of form, in colour, in air, in distance, in grandeur of effects, of rocky heights, deep valleys, moon-lit lakes, and mountain glories shooting into star-lit skies, is as different a being, as any other planet could produce, to an individual, who will, utterly regardless of the earth's beauties which surround him, spend day after day of his life shooting a few innocent useful sparrows; or amidst a wonder of sunset loveliness, when the mind of God seems to bring the glories of heaven to surround earth with an evening dream, heed not its majesty of grandeur, but satisfy his earthly soul with destroying a sea-gull, or anything that has life, with no other purpose but taking it.

It may be asked, what is the object of, and why this vast eternity of machinery in suns and and worlds, and why not eternally a universal nothingness and blank, without God, without matter, life, light, or existence of any kind? for there is a vast amount of misery and suffering

connected with this grandeur of creation, which we have no reason to believe belongs to this planet only. Does sin, misery, suffering, and all the evils life is liable to, exist through all the starry space as it does here? Is it the penalty attached to the privilege of life?

It is a singular principle of the government of the Deity, that He invariably exacts work, suffering, risk, energy, often life itself, for its advantages, amenities, powers, pleasures, gifts, and for very existence. No animate life on land or sea is exempt from this continuous struggle for self support or preservation.

It may be said a man born to wealth, may live a life of idleness and luxury, revelling in the enjoyment of every pleasure nature in its generosity bestows on his creatures, but God will follow that being night and day with wretched ennui if he does not make his life useful; and a constant feeling of horror that his life is of no use to his fellow creatures will hang clouding his daily existence, and when death approaches, he would rather sink into annihilation, than appear before his God to answer for the useless, idle deeds done in life.

There is a constant equalization of happiness in nature, and the poor peasant who goes to bed at night after a hard day's work, sleeps sounder and is happier than the millionaire who has past a day of uselessness, wasting the energies and means of life, which God gave for a high and useful purpose.

CHAPTER XI.

1. Nature's apparent severity. 2. Duality of Thought. 3. Benevolence and Necessity of Natural Phenomena. 4. Memory. 5. The Philosophy of Dreams. 6. The three Dreams—the City beyond the Stars—my visit to Hades—my Skeleton.

1.—Under certain aspects nature seems to be a rude and relentless master.

Offering no help in time of need, and destroying the very individuals who are engaged in carrying out its own purposes in the commerce, government, and amelioration of mankind. The brave mariner ventures over the vast oceans of earth for the purpose of bringing articles of food and clothing from one country to another, or of taking a living freight of human beings to people uncivilized lands, and the wind and the waves rise up in fury and send the noble captain, his crew, and multitude of helpless souls to a watery grave.

The venturesome indefatigable traveller or missionary, penetrates into and amongst savage communities, with the laudable feeling of spreading truth and civilization amongst natives unacquainted with either, and the savages, instead of receiving him with gladness, murder him, or he dies of fever or exhaustion.

The benevolent visitor amongst the poor and sick of our large communities, administers comfort, temporal and spiritual, to the needy and dying, and returns from his pious labour fever-stricken, and dies.

Endless are the instances of benevolence, risk of life to save others, laudable enterprises, and good works, which seem only to be rewarded with misfortune or death.

But this gloomy picture of a Deity's governance of the earth, physically and morally, must be examined, and not judged by solitary instances of suffering.

The wind that sends the storm-beaten ship, and its hundred or more inhabitants to perdition, is clearing away the contaminated atmosphere that surrounds millions of human beings, without which they would sicken and perish by tens of thousands, and the accumulated decaying matters of earth are thus dispersed, and their necessary decomposition facilitated. Is nature to stay its work of universal benevolence to save a few individuals in a ship?

The traveller or missionary who risks his life in his arduous enterprizes, only submits himself to those first obstacles that invariably arise to all new occupations either of country, science, or art; and the pious visitor cannot expect nature to dispense with the fixed, immutable laws of matter, to save him by an express miracle. There are certain universal laws of governance of matter in nature, and the very justness and goodness of God is evident, in His NOT interfering or staying the wide benevolence of His purposes, for the sake of some casual suffering, that may occur through the necessary force or execution of His will. Rest calmly amid the revel of the storm, whether of the wild winds or waves, or those still wilder winds and waves of human depravity, and

those mysteries of surrounding evils, which prevail in society; God has a high, great, and benevolent purpose in view, which will appear in the happiness and care of the many, though it may be to the death or misery of the few.

2.—Duality of thought. It is a general impression that although the mind may change from one subject to another, with the rapidity of the will, that still it can only think of one thing at a time. This is an error, which became evident to me without seeking it, or being aware of the suggestion. I was sitting looking at the paper on my parlour wall one evening, without any desire to see it, for it was one of those absurd diamond patterns, which the want of taste, art, and education in England cause our paper stainers eternally to inflict us with; when I was led to think how much beauty to our sight, and pleasure to the intellect they might give us, by applying to nature for their patterns, instead of their own evidently unfruitful minds. Following up the train of thought unwillingly, my mind was running over the forms of the number of wild flowers that crowd our hedge sides, as though God had made them to strew our every path with beauty; and I thought that a paper stainer might in a single country walk take home a hundred lovely patterns which would be a continued source of delight to all minds, educated or not. I had scarcely come to this conclusion, when I became apprehensive that my mind had at the same time been occupied

in quite a different train of thought, on other subjects in far distant places. I had been distinctly thinking about the fine, open, calm sea there was at and round the north pole, and which the wild sea fowl of these icy regions seem to know of, as in severe winters they fly northwards. It was suggested that this source of so much magnetism and electricity, this cradle of the Aurora, might have sources of heat independent of the sun's rays or influence, which kept it in this calm and probably mild condition. Still further thought led me to the conclusion, that though the eternal ice near this open sea round the pole seems placed as a barrier of nature to prevent our peering into its secrets, yet all must eventually give way to the power of man, who will be allowed to penetrate every hidden recess of the planet; and that in time science in engineering will construct vessels of such strength and power, with cutting machines equal to the task, which will open their way to the desired object.

The two conclusions so widely different in subject and purpose came to an end as I have written them, simultaneously; and I have found that to enforce this duality of thought has not proved successful, that it must be left to its own calm musings to bring about this singular effect.

The student in anthropology has yet a wide field of study before him relative to the operations of thought, and its origin from and connection with matter.

Many persons will find themselves reading a

book, and thinking of quite another subject at the same time; but such reading, if not repeated with more concentrative powers, will make but a feeble impression on the mind.

3.—Amongst the wonders of the natural phenomena of life we are surrounded with on this planet, how many there are, the absence of one of which, would throw everything into such confusion that life could not exist, or existing be one continued source of misery? Instance—friction, weight, gravity, adhesion, elasticity or flexibility. Without elasticity for instance, in the ligaments, tendons, and skin of animals, life would be an impossibility. Of the faculties, how many are there in operation every moment without our thought of their presence? Familiarity causes these blessings to be unnoticed, forgetting that an infinite wisdom has ordered and arranged all things for our good. Without memory for instance, life would have been a useless appendage to a planetary existence. What a marvellous faculty of our nature this is, I was going to say human nature, but animals have it sufficiently developed for their sphere of life.

4.—The accumulations of memory in an ordinary life, are beyond the sphere of enquiry. What it is that thus retains impressions, and stores them for good or evil, pleasure or use, is a subject of investigation, philosophy will eventually reveal with success. The faculty, like several others, seems to have an independent power not

subject to the will. Events, circumstances, individuals, localities, and effects, which occurred or were seen half a century ago, rise up suddenly in thought, without anything relating to them causing them so to issue from their long hidden cells of repose. Sometimes a cause similar in kind, will recall an object, scene, or person long since passed away; but at other times an individual for instance, whom we saw or conversed with thirty years ago, suddenly springs up in memory, such individual never having been thought of from that time to this, and no cause can be assigned for the sudden apparition; where did that particular memory dwell in that thirty years, and why its reappearance?

The faculty seems to be made a powerful instrument of reward and punishment, happiness or misery, according to the good or evil actions we have committed in life. If evil, the deity has made it a mode of punishment, from which there is no escape, and which will assuredly follow the soul into eternity. For though the world may not know the evil thoughts and actions, which may have been secretly indulged in, and outward punishment may be escaped; for every evil done God adds another link to the chain of memory which will bind the guilt for ever to the individual soul. So it will be with our good and virtuous actions in life, they will ever be a source of sweetest pleasures, here and hereafter, bringing up treasures of love, charity, truth, and kindness, which improve the health, become fixed in the

kindliness of the countenance, and rendering life happy by the memory of the good done in it.

In closing this subject, the study of which would fill a volume, I will relate a curious instance of the power of memory, its independence, its mastery of the individual, allowing no escape, and its effect on the nervous system.

A little boy* about four or five years old, sleeping in a room by himself, was awakened by an alarm of fire. It was not in the house he was sleeping in, but in a neighbouring street. He heard the fire-bell ringing, which was then situated by old St. Catherine's Church. He lay listening and trembling with fear, but no one came to him, and after lying awake some time, sleep overpowered him, and he heard no more except what was related to him next morning by his mother. Nothing transpired in after life, except a trifling thought of it, whenever a fire occurred, till he was turned fifty years of age. At this time he began to waken at the exact time (a quarter past one) at which he had awakened in the alarm of fire when he was five years old. He heard a bell ringing, and the mysterious part of this was, it was ringing in the distance, at the same spot in the town by St. Catherine's Church. At first little notice was taken of it, and it was not impressed on his mind as a recollection of anything, till night after night, at the exact time, the awakening took place, and the everlasting bell was still ringing its rapid monotonous clang. Suddenly the

* In Liverpool.

dreadful truth flashed into his mind that it was the fire-bell of his youth, and as the time accorded exactly with the time he was first alarmed, and as he knew there was no fire-bell now, it was evident it was the memory or impression that was having its own fling, after forty-five years of abeyance. A very few nights, as the awakening and ringing took place punctually to a moment, and the ringing lasted the same length of time as the original forty-five years ago, the thing became intolerable, unbearable, and a feeling ensued that insanity would be the end of it, if it was not conquered. This, however, was found impossible. Various means were used without effect. Even when the person got up and dressed, and walked about, the bell rang away in the distance its original time, till at last, by strong efforts of common sense and reason, the effect was so far mastered, as to avoid any further evil than the inevitable fact, which has never ceased to this day. Exactly to a minute, at a quarter past one, the awakening takes place, and the eternal bell rings, not in the ear, in the mind, or in imagination, but exactly at its distance in the locality it was first heard.

Memory does not require facts, or circumstances of vision, or hearing only on which to exercise its functions. It registers its own thoughts and imaginings, and herein lies much of its power and value to man; as many of his inventions, improvements, experiments and their results, his arts, language, and endless pleasures of life, depend on this singular faculty of remembering an idea or thought,

and at some future time, embodying it in a useful and practical form.*

Sometimes a word, or a name, will run the mind back to years gone by, and the memories of loved ones passed away will strike such a heart-depressing chord, the soul feels no other desire but to depart, and be with the beings we once dwelt with, in the passionate loves of early life.

This feeling is so strong, it never seems to fade in after life. The spirits once united in earth's deep affections, never again separate; death may divide the material part of our nature, but the immaterial, spiritual natures of true love never are severed, either by death in this world or that which is to come. As time passes, and our own approaching dissolution thins the veil that separates us from the eternal future, the feeling grows stronger as the longing soul nears the anticipated union with the loved departed.

5.—The Philosophy of Dreams. The distinction between the mind governed by the will, and the mind left to its own powers, resources, fancies, and wanderings, is a subject for the anthropologist to determine; what is the connection between the one and the other, and what their relation to matter, and how matter is affected by such apparently spiritual influences? In sleep, why are not

*There is a circulation of thought and memory in the sensorium, which can be ascertained practically by anyone who will attend to the duration of time of a thought, and its return in its original force.

the mental faculties prostrated like the muscular, and is it any argument for the distinction between the spiritual and material nature?

From experience and thought on the subject, I have come to the conclusion: firstly, that in dreams, there is a semi-reasoning power; secondly, that there is a higher imaginative power in the mind freed from the power of the will, than when subject to it; thirdly, that there is a more intense dramatic or romantic power in sleep, than when awake; fourthly, that there is an independent, cumulative, concentrative, and arranging power in dreams.

As these postulates may be doubted, I feel bound to give instances or facts to prove them. I do this with some reluctance, and not without some misgivings about their introduction into a work like this. I give them with no other motive than to illustrate the above texts; and have no hesitation in stating at once, that I have occasionally magnificent dreams, chiefly of gorgeous architecture and romantic old city scenes, and that I could easily give a hundred such as I am now about to describe, all firmly impressed in memory.

THE THREE DREAMS.

THE CITY BEYOND THE STARS.

6.—I dreamt one night that I was absent in space, with a feeling and power to go anywhere. I felt and knew it was myself, for I felt my hands capable of moving as a kind of guide in my motions. I immediately became

impelled by a strong desire to speed my way beyond our astral system, to see if I could reach another. This thought had no sooner taken possession of my dream, than I shot up with a speed no waking thought or language can describe. I passed Sirius in a moment, and saw its planets, and then ascended with like speed amongst innumerable stars, till I got to the milky-way. Here I paused a little to gaze on such a scene of nature's magnificence that no pen can describe. The stars here were so numerous and close together in myriads, that the surrounding space was not dark like ours is at night, but all was one lovely light blue-gray twilight. I saw planets innumerable whirling like rings of brilliant fire round their centres; all seemed one maze of interminable, indescribable grandeur in motion. Having gazed on this sight, I again shot up through straggling stars, less and less in number and brilliance, something like leaving a crowded city, and getting into the suburbs where the houses became fewer in number, and further apart, till at last I had left our astral system far behind, and was winging upwards with incalculable speed in pure space, where all was blank, not a star to be seen, yet it was not quite dark, there was a faint blue light pervading space, apparently inherent in it. I again paused after looking hopelessly for another astral system, and on looking back to whence I came I could see our system as a faint dim long line of light, but no distinction of anything; just a mist, something like what the light of

London appears at night from some of the heights of Kent, or Surrey, twenty miles off. I began now to consider my journey hopeless, and after gazing around and upwards into space and seeing nothing, I began to think I had better return to my own system, for I did not think there was any other. Taking a last and searching look upwards, I thought I saw far away above me, a small faint light of a purplish blue colour. I determined in a moment to see what it was, and again shot upwards, and had the satisfaction of seeing it increase both in magnitude and brilliance, though the latter was of a dull solemn twilight colour. As I neared the object, such a scene of extraordinary beauty and originality revealed itself, I despair of describing it with anything like justice. I began to see towers, domes, spires, and rocks, and small light objects moving about them, in the surrounding air. A slight haze of purple light spread around into space proceeding from the objects themselves, there being no external light from any source, the luminosity appeared inherent in everything. Approaching still nearer I saw that it was a solitary city, about the size of one of our cathedral towns, built on a rock; it was not a small globe, but a castellated walled city, with battlemented walls, round towers, which had low sections of globes for roofs, the walls and towers ran along the edges of the rocks, accommodating themselves to their irregularities. In the interior I saw domes and spires of singular beauty, which I will shortly describe. The rocks had no further foundation

than the outward space, only I remember seeing some roots and festooned tendrils hanging about their base. As I neared this solitary aerial city, I found the small pale objects I had seen moving about the towers and walls, when at a distance, now shewed themselves to be human beings, like us, but all females, elegantly dressed, purely spiritual and transparent, and they were enjoying themselves in a most extraordinary manner. They came tumbling over the walls, sometimes in crowds, sometimes one or two, they floated about in space, sometimes a number of them would roll and tumble over and over in the air, sometimes two or three would dart down suddenly far away, till they became almost invisible, and then return again, some would fly further into the city, hovering around the beautiful spires it contained, and all their motions with a grace, elegance, and ease, only a painter could realize.

Before going further I must mention, that everything—beings, rocks, walls, towers, and buildings, were all transparent, and of a lovely mixture of purple hues and blues, with some slight greens, and orange tints amongst the rocks. As I approached there was a signal of alarm, though I heard nothing, and all the floating figures outside, were over the walls into the city in an instant. For a moment I saw nothing more, till head after head began peeping over the walls at my intrusion, and by and by, it became crowded with them. Then two female figures, rather taller and more elegantly dressed than any I had before seen, with

a tiara of jewels round their heads came out of one of the round towers, and sped towards me in an instant. They seized hold of me, one on each side, and quietly, but gently, bore me over the walls into the city. Here an extraordinary sight presented itself. A crowd of similar beings, all females, all young, all dressed alike, (much the same as the virgins in the Panathenaic costumes, as shewn in the Caryatides at the temple of the Erectheum,) thronged and pressed around me, some hovering above me in the air, and they laughed and shouted for joy at my capture. Immediately the two superiors cleared a ring, when the crowd of beings became quiet, some stood, some sat, some folded their arms round each other, all were in graceful elegant attitudes. The two principals then began to question me about who I was, where I came from, and what was my errand and purpose in coming there. Here I must inform the reader, that our language and thoughts were not communicated by speech, neither party spoke, it did not appear to be necessary, we looked at each other, some slight gestures were made, but the eyes seemed to be the medium of thought and information, and everything was perfectly understood. In answer to their enquiries, I told them I had come from one of the worlds belonging to a planetary system, in a large astral system, I had left behind me. As I described this world, with its seas, mountains, rivers, days and nights, its sunsets, clouds, cities, people, life and death, objects, and other minutiæ, the most intense interest

was exhibited in the multitude around, who flung up their arms and screamed with delight. Having got all the information they could from me, I wanted some from them in return. I saw no males nor children, and on enquiry, a profound silence ensued, and a sorrow seemed to pervade every countenance. On my enquiry where the old people or children were, they informed me, there was neither one nor the other, that they were gifted with eternal youth, never as it was expressed to me exceeding the age of twenty-six, but that for anything they knew they had been there for all eternity. I then asked them permission to go and take a ramble through the city, and especially I asked to allow me to see the magnificent central building in the city? They told me I could not be allowed to go into the city, and certainly not to see the grand central emporium, and its interior, which I much wanted to see. I must here give a description of the glimpse I got of the capitol. I saw a large massive square tower, which was surmounted by a singular quadrangular segmental cupola; besides this was a most singular and beautiful tower, or rather a double tower or Campanile. It was two towers built together one much thinner than the other, they joined each other as high as the square allowed, but when this changed to a hexagon form, they separated, shot up in beautiful pillared stories, or ornamented arches, the small tower going considerably higher than the large one, this last terminating in an hexagonal cupola of inverted ogee form. Their transparent

purple and blue colours as they penetrated by their own internal light into the azure gloom was a strange and lovely sight. As I found I was not permitted to go into the city, I asked them if there was another astral system far above us in space; they said they thought there was, but they had never seen it, they had seen a faint light where ours was, but they did not know what it was. They advised me to go back again, as they said, if I passed their city towards another system I should be attracted towards it, and never get back again. At this moment a solemn chime of minor chords, having a simple melody of unutterable sweetness, came from the double Campanile, and floated in the blue atmosphere around, softened afar in the thin air, and I saw from some openings in the pillared tower, that they came from a peal of silver bells. On the first chord being struck, the whole mass stood up singly, turned towards the tower, folded their hands over the upper portion of their bosoms, bent their heads, closed their eyes, and remained silent, as though a devotional prayer to a God THERE was the duty of a periodical return of time, as it ought to be the wide creation over. Some misgiving took possession of my dream as soon as the chime ceased, that it was a warning to exclude the stranger; for the two superiors suddenly seized me, one on each side, and amidst a loud wail of sorrow of the multitude, they bore me over the walls, darted deep down into space with me, and left me, and I must have had a quick passage through the milky-way and the stars back

again, as they had not left me one second before I opened my eyes in my own bed-room, and saw the moon in its last quarter peeping through the window.

SECOND DREAM.

MY VISIT TO HADES.

I must now make an excursion another way, equally illustrative of the imaginative, constructive, and arranging power of the mind, when independent of the will. I dreamt one night that I sank through all the strata of the earth, below the granite and plutonic rocks. I had no feeling or idea that I was either in body or spirit. My personality was sufficient. I then came to an interminable range of pillared avenues, lofty and wide, with flat roofs and flat floors, apparently of one solid piece, the avenues having no sides to, the roofs being supported by gigantic massive columns without plinths, bases, capitols, or abacus, and as far apart as the avenue was wide. These avenues were perfectly parallel, no visible end was seen either way, nothing but an endless perspective, and they were crossed by similar avenues at right angles, supported by similar columns. Turning into any of these, it was impossible to tell where you were, or where you were going to, for everyone was alike, and all endless. Travel one of them for ages, and the same eternal perspective was ever before and behind. There was a dull red light prevailed, something like what there would be in a room where there was a dull fire, without blaze.

This light I perceived came from underneath, which was so far transparent that I saw there were other avenues of a similar kind beneath. All roofs, floors, and columns, were of a rich porphyry, and semi-transparent. Along these avenues, in every one, and every way, was one continued movement or progress of beings, all females, all dressed alike in dark gray cloaks with hoods, which they held round their heads with the left hand under the chin, so as to shew their faces only. They were all hurrying onwards as if anxious to get to some particular place, which they never got to. Sometimes in crowds, sometimes in twos and threes, sometimes single, sometimes they met from the cross avenues, and the same momentary confusion took place, as often does in cross thoroughfares in cities. They did not take the slightest notice of me. Their countenances were care-worn and full of melancholy anxiety, their full round eyes most tenderly piteous, and suffused with tears, as though they were worn-out with their eternal hopeless errand. They did not exactly walk, for the ground was of polished marble smoothness, they shuffled along with a step and a slide much as learners go in skating. On looking through the transparent flooring, I immediately sank through it to the avenue below, where everything was similar, roofs, floors, columns, and beings, with this exception, the avenues were a little less in width and height, the figures were in the same perpetual motion, and the whole was a little lighter and considerably hotter, and

the females paler, and apparently suffering more. I now saw that there was still another range of avenues beneath; I instantly sank into it, when I found everything similar but smaller, except that here they were all men dressed alike in dark gray cloaks, which they muffled round them. They were not moving about so much like the females above, but standing in groups. The whole was intolerable with heat, and suffocating to me. The floor was still transparent, and I knelt down on it, to look at the scene below. I saw there were no more avenues, this was the third and lowest series, and I now gazed with intense interest into the incandescent fiery mass beneath. They were the everlasting burnings of the earth's centre. To my astonishment they teemed with living beings, who were moving about, and apparently with the utmost freedom and enjoyment. I could see their arms moving, I could hear them talking and laughing; matter, beings, and all were one red hot mass, and when they laughed I saw them open their mouths, and shew their tongues and teeth, and I could see down their throats of living fire. Some of them sank in the seething fluid, but only to come up again as if they had been enjoying a bathe. I now began to feel a most suffocating sensation from the intolerable heat, and I got up and went to a group of bad-looking men who were standing together looking at me, and I spoke to them, and asked them which was the way out, as I wanted to return to the world above. One of them then seized me, and dragged me along, the

rest following to prevent me escaping, and they took me before a kind of superior, who was sitting on an elevated place, a kind of fiery dais, surrounded by superior beings. This superior asked me what I wanted down there. I said I did not want anything, I wanted to go back. He said no beings who ever came down there got back again, that I was doomed to walk forever those eternal, endless, suffocating avenues, and he waved his hand over me, and they again seized me, and pushed me into a moving crowd. The horrid feeling of never being able to escape was I suppose the climax of my dream, as I awoke and gazed with intense delight on the sweet cold morning air, and coming twilight of earth, and prayed I might never again repeat my visit or adventures in Hades, or to its inhabitants.

DREAM THE THIRD.

MY SKELETON.

In the two preceding dreams there is scarcely a circumstance in them, but what I can connect with some event, sight, or thought in life, which happened, wide apart certainly over years of time, but which the mind, left without the influence and command of the will, arranged in its own fantastic, imaginative way, like a schoolboy let loose from discipline, and indulging in his free wild wayward frolics. The following brief effort of imaginative power in dreams, is given merely to shew the intensely dramatic, tragic, and ludicrous powers of the mind left to its own uninfluenced resources.

I dreamt one night that my skeleton walked out of my body. I cannot tell how it was accomplished, but I felt it going, whole and perfect out of my system, and I felt all that horrid feeling the reader may conceive, of a collapse of the viscera and muscular system and teguments, which would take place under the circumstances. As soon as it had got clear out of my body, it turned round and stood before me, and it was the most perfect, clean, polished skeleton that can be imagined, there was not a shred of a ligament or tissue of any kind on it, no surgeon could wish a cleaner specimen. As soon as it turned round to look at me, I recognised it as being mine, and as being like me, and I gazed on it with a regretful feeling of awe, as though I would rather it had remained in its proper place, but in that I was powerless; there it was, standing before me. It then held out its bony right hand to shake hands with me, and I tried to hold out my right hand to shake hands with it, but felt the effort was useless as having no skeleton within me, I had no power to move my arm, only a nervous desire to do it. My muscular system not returning the compliment, my skeleton became angry, it withdrew its arm; the whole skeleton, the interior of every bone became filled with a fiery light, the orbiculars of the eyes shot forth gleams of the most intense bright fire, which sparkled out like magnesium-wire light. The nasal bone, the mouth and the teeth glowed with living fire, and the joints, the metacarpel and metatarsal bones, were all glowing with deep red

fire. The intensity of the anger being apparently over, the lights began to decrease in brilliance, the hollows of the eyes turned to a deep red fire, and all the skeleton assumed a glow of crimson red. All this while the surrounding back-ground was deep blue, which set off the lights and rotundity of the skeleton to the utmost advantage. The deep red then began to change, and a most brilliant green ensued, such as would be produced by prussian blue and chrome. This again began to fade, and the skeleton, much to my anxiety, began to recede into the surrounding atmosphere. It then began to assume a lovely purple colour, which again declined into a dim pale lilac, it still receded, getting fainter and lost in air, diminishing in size, and at length disappeared. When I awoke, so vivid had been the phantom, and its effect on my mind so impressive, that the first thing I did was to feel at my arms, hands, and ribs, to see if all was right, and was much relieved to find my errant skeleton had returned to its duty. What causes these visions so straightforward and so apparently real, what power originates the arrangement of thought, expression, and effect they assume?

Dreams in general are but wild, unmeaning, evanescent wanderings of unguided thought, but at other times they seem sufficiently under control, as to leave ample scope for enquiry.

They often conjure up individuals, facts, and scenes of forty or fifty years ago, and unite them into ridiculous union with circumstances of yesterday,

often forming the most impossible combinations imaginable, but frequently sustaining the postulates at the head of this subject with remarkable power of truth and effect.

CHAPTER XII.

1. Diffusion of Mankind. 2. Typification of coming events. 3. Millennium. 4. False Prophets. 5. Man's Progress considered by the Analogies of Nature. 6. Occupation of the Planet. 7. Necessity and Importance of Progress in Civilization. 8. Governance of Creation.

1.—Man often carries out the will and intentions of God without knowing it. He feels desires implanted in his affections; impulses, impelling him to go, to see, or to get something that will either gratify him, improve him, or enrich him, and increase his comforts and happiness. He indulges in his loves, ambitions, and desires, and when these are pursued by multitudes for a length of time, an effect, not contemplated by the individuals themselves ensues, which reveals a purpose in those affections and desires, in furthering the objects of the Deity in diffusing, extending, and benefiting the human race. By these desires and impulses, man spreads his species, and inherits the earth. He gathers the products and riches of distant lands, and adds to the enjoyment of his fellow creatures, by that sublime effort of human power, daring, skill, and ingenuity, commerce; for it is no intention of God that this earth should be an unprofitable wilderness.

That dream of a beautiful unknown country which is to be sometime enjoyed; those treasures

of earth which are always not here, but elsewhere to be obtained, lies at the foundation of that passion for emigration, which has existed from the earliest history of man to this day. By this restless influence over man, he will penetrate to every habitable portion of the world, and it is evidently a principle implanted by God, to fulfil His purpose and intention in civilization.

We find it in the earliest historical events on record. "For all this land which thou see'st, to thee will I give it, and to thy seed for ever." Gen. c. xiii. v. 15. "A land flowing with milk and honey." Exodus, c. xiii. v. 5.

Man has ever his Elim, with its wells of sweet waters, and its shadowy palm trees looming in the distance, which when possessed, he still murmurs and sighs for other pastures. The land of Promise was the ruling passion of the Israelites of old, as it is of man at this day

This inherent principle is confined to no nation or people. The Hindoos of Hardwar and Benares meet death in a thousand forms to earn a dreamy paradise of doubtful existence; and the Mussulman from the minarets of St. Sophia or Erzerum, gazes upwards to that heaven of luxury which his creed has promised him in the future; and the Muscovite of the Kremlin dreams of a faultless southern clime, whence proceeds all that is beautiful, rich, and warm, in the mysterious unknown distance; and the peasants of the banks of the Oder and the Weser sigh for the glowing lands of the far west; and though we read in history that Poppæa the

Empress of Nero, shod her steeds with shoes of solid gold, this is far eclipsed by the ragged, shoeless, combless boy of Ballinamore, who, walking by the banks of the Shiven, tells his bare legged sister that the cities of England are all paved with gold, and she turns up her large wondering bright eyes on him, from under her shaggy hair, believing every word he says.*

2.—There is a singular feature of typification which nature seems to impress or put forth as a dawn; foreshadowing events, principles, beliefs, and actions, which govern mankind long after the type or thought had been embodied in form, by the minds so inwardly impressed.

It is the expression of the Intelligence of nature of the future governing ideas, and consectaneous actions of man.

In all the great ruling events of time, in religion, in science, in art, in invention, in laws, and government, the foundation of that which is, must be sought in the past history of mankind. Whatever of the high efforts of genius and science, which gild and illuminate our present greatness of civilized society, it was all typified thousands of years ago, by that prophetic thought, which impressed itself on the minds of the elevated of the earth in long-past ages. The principle is now in operation as in the ancient times.

The "good time coming" is no mockery of human expectation, it is the impress that precedes the event.

*A fact the author met with in Ireland.

In this singular agency of the Divine Mind, art appears to have been one of the principal sources, recipients, and exponents of this mysterious influence.

The sublime sculptures of the Babylonians and Assyrians were not the mere ignorant, idle fancies of dawning art. The inspiration came from a higher source and for a nobler purpose.

The golden statues of Babylon, the union of the forms of the human, the lion, and the bird, had a meaning deeper than the mere chiselled forms of a poetic imagination. The winged globes of the early Persian and Median sculptors, delineated over the heads of their priests, typified that spiritual influence, connection, and governance of the earth by the spirit of God, which we recognise at this day. The ancient sculptures of the Ram of Persepolis, typified the dawn of astronomy three thousand years before the Christian era.* And the winged bull, and the carved wild gazelle, before the sacred flowers in the Palace of Nimroud, symbolized the strength and speed of science, which in modern days realizes the ideal carvings and visions of impressed imaginings, which dictated the forms and sculptures of four thousand years ago.

These typifications, aspirations, and prophetic gleams of futurity, sustain our hope and confidence in a coming time of intellectual power, peace, and happiness on earth, and a reliance on a future of still higher felicity. Whatever of hope, power, or happiness is before mankind, will, if intended to be

* J. S. Buckingham's travels, vol. xi. p. 254.

realized, be by work, not idly waiting. Heaven shews the way and provides the means, and leaves man to his share of duty in this intellectual progress. Following up this reflection, we find ourselves in that state in which we are wondering what the intentions of the Deity are; not only with regard to man's powers over the physical and chemical elements of this planet, but whether a more universal union, companionship, knowledge, or intercourse of thought, will take place between all beings of the same system. There is a feature of nature's progress that calls for particular attention, which is, that a twilight of thought, in whatever department of mind or science it is, invariably precedes a coming power of grand importance on this globe. Nature comes with its skirmishers, its sappers and miners of intellect, who tumble away the boulders of ignorance, and who prepare the way for the great army of action, marching steadily, but surely, in its destined progress, till some great victory over ancient darkness and ignorance is accomplished, and an occupation is obtained of human grandeur of thought and purpose in utility, before unknown, and which is bringing us nearer victory after victory of mind, all of which is God's purpose in the summit of happiness, eventually to be realized in this yet undeveloped planet.

In these flights of the absent soul, one of the most singular effects of the mind's qualities or powers takes place, but only if attention is given to it, and if the term may be used, free rein is

given to the winged soul in its flight, which is, that a world of distances, material instances, effects, gleaming of phenomena, brilliant scenes of world's not of this world, and gleams of the Godhead's doings elsewhere; burning flames of the mind's lights, which you had better attend to, when a drop of ethereal electricity from the very essence of the Godhead, gently and sweetly falls like the fructifying dew into some selected, prepared mind of earth, shooting the glimmering rays of the very sun of the Deity, into a further grasping of that holy inexhaustible mind of the universe, which is preparing, in its due time, facilities of thought, action, and feeling, unknown in the present state of the planet.

We are at present on a world only just dawning into power. The philosophic minds of earth know well what is meant by that word.

It is now chiefly occupied by its material earthly occupations. But as the individual life penetrates in its progress into more spiritual aspirations after the refinements of nature, enticing us onwards to a culmination of mind-life yet unknown and distinct from mere animal life, so we are continually, silently, but certainly moving onwards, into new and more glorious vistas of thought and happiness. Fresh fields of revelations of ideas spread beauties before unknown and unanticipated; and what communication of intelligence of soul will ensue between the creations of the universe, or between the Creator and the created, time will alone shew. Symptoms, the

dawn of a more universal happiness, a sublime holiness of attachment to and adoration of the Deity, and benevolent intercourse with each other seem to be breaking with unthought of splendour over God's eternal works. Expectations cannot be too extravagant in our hopes of the brilliance and power of the future destination of man.

3.—The world is only dawning into intellectual light. A few shooting rays have gleamed from beneath the horizon within the last 3000 years. It may be that the great minds of earth have yet to come. We must get out of these animal and sordid propensities, this depressing, sorrowful truth, that the possession of *money* is the sole object of life, not what mind happiness it may bring, or what good it may dispense to our fellow-creatures. We must get into, nearer the mind of God; for the Heaven that is foretold and anticipated may be here on earth. What right have we to expect we shall occupy those spaces in infinitude, which are filled, or may be, with their own organizations?

Yes, there is a millennium coming, but it is a millennium that will be progressed to and worked for. There will be no violent changes of nature, or any appearances or forthcomings of anything out of the ordinary course of nature's laws.

It is within the bounds of probability that morals will be improved, poverty and crime almost banished from society, disease materially lessened, the life of man rendered one continued source of happiness, physically and intellectually,

as it was intended to be; mankind will live the natural life intended by its Creator. Wars will cease, and nations become more as one family. We are rapidly approaching to these long-wished for consummations, though the sceptic may deride, and the unthinking world only look upon them as the dreams of an enthusiastic visionary.

4.—It is a painful thing to find men, whom the world credit with learning and intelligence, but who seem to have neither, alarming timid people, who unfortunately put trust in them, with prophecies of the proximate destruction of the world by fire and earthquake, and the coming of some wrathful manifestations of divine displeasure. Let me call attention to the following. God never lays a foundation for a purpose, but it is fulfilled. It may involve a certain period of time, but it will be accomplished. Now the coal and minerals of this planet are not one-hundreth part developed or utilized. They were placed where they are for man's use, and the world will exist and society move in its usual course, till every particle of coal, iron, gold, silver, or other metal, or a diamond, or precious stone is found, for God intended them to be used, and what HE intends will be done. Tens, perhaps hundreds of thousands of years will elapse ere this is done, so live and work in peace.

5.—The reader will have perceived that in many of these thoughts the argument is founded

on a supposed analogy which exists; first, in the life of man and the planetary system; secondly, the life of man and his existent species. In the first I have endeavoured to shew that the planetary system came from one which preceded it, that it will progress to maturity, and the utmost perfection it is capable of, decline and decay. In the second it will be found that man as a species, having had a commencement, probably little above the animal life he was surrounded with, has gradually emancipated himself from his probationary state, to one of union and civilization. Probably one hundred thousand years might only advance him thus far, as his want of knowledge and use of the metals, would prolong the period of his nomadic life through long ages of time. In these primitive ages he would act numerically as he does now individually. His first struggle is for very existence in animal life, for food and covering, for he finds the world previously occupied, and nobody seems to want him; quite the contrary, he is only looked upon as an intruder on the original possessors. He asserts his right to live, simply by his physical powers. After ages of little more than a hunter's, or at best a shepherd's life, he begins to surround himself with the comforts of clothing, home, society and family endearments. In time, numerous families begin to unite for mutual benefit, protection, and government. Finding there are objects of desire and comfort in distant countries which they do not possess, they exchange their produce for that of others, and thus trade

originates simply as barter, for reciprocal benefit to each party.

As his property increases, for trade has been the commencement of all civilization, man congregates in cities, and architecture springs up as a consequence, first of utility, then of wealth, lastly, dawning taste, and a feeling for the beautiful, begins to bud forth as ornament or art.

This is exactly analagous to individual life. Man's first struggle is for the bread of life, his next effort is for the comfortable surroundings of life, he now aims at accumulations of wealth, and security for declining years; having obtained these objects of his desires, all from laudable and proper instincts or motives, he begins to find a vacancy of his purpose unfulfilled. He sighs for something he has till now neglected and never thought of, and finds there is something else in life and human nature than bread, and clothing, and dwellings, and handsome furniture, and land, and silver, and gold, all are strangely unsatisfactory to the intellect that demands something for mind cravings, after the animal ones are satisfied. His restless spirit seeks enjoyments in intellectual pursuits, in painting, poetry, music, science, history, and the world of literature, which is open to his tastes. This will be exactly similar in the progress of the species. The first principles of struggle for existence are yet scarcely over. The accumulative period is only now in progress. The dawn of man's intellectual state is only breaking into existence. It may have commenced 3000

years ago, but that is but a brief period of man's duration. The sum of these preliminary thoughts is, that the glories of the arts have yet to come. The mind power of poetry, art, music, chemistry, and engineering, that will prevail on this planet, is for time yet to develope. The assertion is safe if the analogy be true, which progresses through nature as it does through individual man. It will go in impulses as most natural effects do, now steadily progressing, now wavering and apparently declining, now breaking again with increased power in fresh places, that is, other countries, but ever coming in the sure destinies of time, which will accomplish the high purposes of creation intended in the marching progress of mind in the history of this planet.

6.—It must be evident to all thinking minds that there are long periods of time yet to come before the world will even have approached the intention of the Divine Mind, in production and intellectual possession. The great Intelligence of nature will not leave His work in the unfinished state it is now in. When I say unfinished, I mean in the state of sin, crime, misery, and unoccupation, by civilized and highly moral and intellectual communities. The high destinies of this world will be, must be, consummated. At present it is scarcely occupied by matter in life, and it has to be filled with matter in life imbued by mind. Reflection will at once lead to the conclusion, that the ignorant, almost savage tribes,

who occupy such vast regions on the continents and islands of this globe, and the equally vast countries occupied almost solely by wild beasts, will in time have to give way to more advanced societies, commercial production, and intellectual life.

God will in His own good time spread intellect, happiness, and plenty, over the earth, but it will all be accomplished by means and work. That is to say, it is man that will advance *himself* into this superior state of enjoyment, and inheritance of nature's offerings. God will make His creatures fulfil His intentions, and it will be by man's exertions He will carry out His great purposes in the consummation of His will.

7.—If this and all other planets, but I will confine myself to this; had been always in the same state of production in its Fauna and Flora, always in the same state of civilization, commerce and intellect in the arts and sciences, there would have been such a stagnation of enterprise, such a blank of energy and purpose in life, that existence would have been intolerable. It is this constant revelation of new objects, new discoveries, new sources of wealth and happiness, that constitutes the glory, and stimulates the industry of mankind. All life as now existent, shews that the world and its inhabitants are in a state of progress, if of progress, then we have come from a less civilized, moral, and mind government of the earth and its means, and are pressing on to a more

civilized, moral, and mind government of the earth's powers.

This leads us to an evident conclusion, that there having been a commencement of life, which has progressed so far to the state of civilization and intellect we are now in; it will press on to maturity, which in the long ages this world has yet to exist, will eventually relapse to its primitive state, and decay as it originated.

The analogy between the individual life and that of its species is indisputable.

Man cannot stop his growth or his passing years. He progresses steadily but surely onwards to the fulfilment of his appointed time and purpose in life, and so it will be with mankind. There is no resting still in creation. To our finite, limited ideas, it may appear slow or undefined, but it is only our inability to grasp at that sure and eternal progress of life, which is now hastening on to fulfil the purposes of the Divine will. The very facts of this progression and revelation of continued enterprise before man, shews a benevolence of the Deity, and a care for the enjoyment and industry of His creatures, without which, life would be one continued state of ennui, which would speedily cause life to cease on this planet.

8.—It is a legitimate object of man's thought to trace, discover, and obey the thoughts and intentions of the Deity, in its mode of governance of its creations, intentions, and ultimate objects, and purposes, in its eternal operations and progress.

Instead of saying it is a hidden theme we have no right or privilege to unfold, or penetrate into; we assert the contrary, that God rather invites, than dissuades to a constant and increasing nearness and union of thought and action with Himself. This is not only amplified and elucidated in the daily walks and work of life, but God carries out His civilizing work by His own creatures.

The great work of creation, its geological changes, its production of life organizations, we attribute only to a Divine power. But we know nothing at present how much of the beautiful surroundings we meet with in our passage through life, are the work of spiritual agencies we are as yet unacquainted with. If our analogies are true, and we see no idleness tolerated or approved by God in life, if there be spiritual beings, either of a primitive creation, or the reward of virtuous industrious lives on earth, those spirits of the "just made perfect," may be employed in the great work of creation. Is it a foolish imagination that some angels of light might design the lovely flowers of earth, and strew the beauties of insect life around us? With us a great architect does not work himself. His master mind designs the fabric, dictates its style, its ornaments, its every glory, from a magnificent whole, to the most minute parts, but inferior workmen raise up and carve the building, it may be so with the Creator, whose grand conceptions of nature as a whole, may be carried out in detail by legions of spirits willing and delighted to do His will.

CHAPTER XIII.

1. Powers of Man over the Earth. 2. Presence of God. 3. Uniformity of Principles in Nature. 4. On Man. 5. Past and Future. 6. Decline of Man. 7. Rotation of the Moon. 8. Present state of the Earth. 9. Concentration of the Earth's Civilizations. 10. National Characteristics. 11. Approaching Man's Culmination. His state then.

1.—The powers the Deity has put into the hands of man are amazing. The changes that cultivation has made on the face of the earth, transforming the surface of barren hills into waving corn, and making the rude haunts of wild animals into fruitful valleys, with peaceful cattle subservient to his will, shew that nature has with a most beneficent care submitted all its creations to man's subjection, wants, and desires.

The Flora of the planet are quite within his power to spread lovely fields of flowers by river sides, or hang the mountain cliffs with richest hues, if such could be spared for beauty, or from that constant demand on the earth's surface for food.

With the exception of fish, and that only for a certain time, the whole Fauna and Flora of this planet are at the mercy and will of man to increase and cultivate or destroy.

As far as the Fauna are concerned, man will eventually arrange with the outsiders of society, whether they will come in to the general work of

the world or quit it, as the time is not far distant when he will not only master but superintend all animated existence, and make them subservient to his will; those who refuse to become civilized, useful members of society, will be hunted down, and disappear from the globe during its culminating state of perfection. This work is going on now so rapidly, that the existence of the genus "Felis" for instance, and many other tribes, is scarcely worth a hundred years' purchase, certainly not a thousand, if they oppose man's possession of the cultivating powers of the planet, and his undoubted privilege to make every animal on it obedient to his will, either in comfort, work, food, companionship, or other mode of utility. There is not an animal on this earth but is now at the mercy of man, whether it is to exist or not. There is a vast change in the Fauna of the planet in progress, attributable altogether to the increasing powers of man to subdue all things to his will, and the Fauna have no chance whatever to save themselves from this tremendous power given to him.

In the early states of man's appearance on the earth, he has had to battle for his very existence with the animals in previous possession.

Numbers of the early occupants of the globe, who would have been exceedingly inconvenient to him in his progress, such as the larger saurians, magetherium, and numerous others, have quietly retired to their fossil homes, but there is no question but that it has been a long and arduous struggle.

Man's progression into science, and the Fauna being incapable of progression, has entirely changed the position between the contending parties. I fear it is indeed hard times for the Fauna of this planet, for the next thousand years. May heaven grant that man may use the powers given him with mercy, and not with cruelty, and that he will not destroy the beautiful Fauna of the earth, till he has fully ascertained how far they may be trained to be useful servants to him, in one way or other as time may develope. Man's destructive propensities are insatiable. I become reconciled to the game-laws, when I consider, that but for them the beautiful and useful animals and birds, summed up under the title of game, would not exist twenty years, if left to the mercy of the multitude. They would speedily exterminate every hare and pheasant in the land.

What is to be regretted, is, that many beautiful and interesting birds for instance, are destroyed, purely for the sake of the pleasure men take in destroying life. These birds were made for some useful purpose. Remember, fellow dwellers on earth, there is not an animal you shoot down with your instruments of destruction, but God has spent thought, care, utility, and benevolence of intention on it. So savage and brutal are the propensities of man, that it becomes a question, whether nature can keep up its intentions of supplying him with those rich and rare varieties of food, and exquisite textures in clothing, which have been provided for

every want and taste of mankind. Man in his cruelty and desire of gain, eradicates, annihilates the very creatures the Deity has provided for his usefulness, as the Castoridæ (Beaver), and the Ermine also seems doomed to like extermination. The propensities for destruction are so great, there are thousands of men who would not care to destroy every living animal or bird on the planet, if they could get individually any benefit by it.

By union and just laws alone, we are saved from this universal destruction of life.

2.—To the pure in heart only, the great governing Intelligence of nature is a presence that can be felt. In lonely walks and solitudes of nature's scenery, the virtuous mind, with aspirations only after good, feels a power of something being near or around the spirit's thought, and a mingled feeling of awe and delight, a sensation indescribable and unknown in the busy world of life, pervades not only the individual, but apparently the surrounding space.

This is the presence of God, or some spiritual being our faculties are incapable of seeing.

For as God, whilst engaged in supporting and governing the vast suns and planets of infinite systems, does not disdain being employed in the construction and maintenance of an annelid or a mollusk, so whilst it is within the bounds of possibility, that God may have a bright phalanx of angelic assistants in his work whom we cannot see, yet He will walk side by side in sweet companionship with man, who will seek his confidence, and rest his nature and his faculties in the bosom of his Creator.

3.—If there be any truth in the theory, that there is a uniform mode of operation in the works of the Almighty; first, between the individual man and his species; secondly, between the species and the planet he inhabits; thirdly, both in the infinitude of the works of nature, and the moral government of the world, then we must conclude that all things have a beginning, a culminating perfection, a decay, and recommencement. Everything in nature, inorganic or with life, supports the theory.

The sun rises, commences its daily work, ascends its noon-day altitude, declines and sets, only to rise again. The twilight dawns at early morn, and spreads increasing glories over the earth, and then fades into evening shadows, and night ensues only to return again to coming day. The tree rises from the seed of a former tree, it grows to a certain height, beyond which it cannot go, it lives its time, does its duty, answers its purpose in its creation, declines and dies, and other trees spring up its offspring, to live a like career. Every mountain has its summit, which attained, the adventurous traveller descends to the common level. All life of both Fauna and Flora undergo the same universal laws, from which there is no exception. Man, his species, the planetary system he inherits and inhabits, will all be subjected to this universal adaptation, which the Deity has imposed as the most wise and beneficent order of all life and being.

The very fact of man progressing in society to more elevated states of moral government, individually and collectively, shews that a culminating

period will be attained, and a decline and decay of nations ensue; for a continued progression in anything in nature is not in nature's laws.

4.—As man has been the last and most exalted being God has introduced on this planet, and as the world appears to have undergone a preparation of long ages of time to provide everything necessary for fulfilling the object of his creation, for his use and comfort, to surround him with useful animals obedient to his will, to supply him with every variety of food his wants and taste could desire, to beautify his path with flowers, and even in the thoughtful care of the Deity, infusing medicinal properties into plants and other objects, so will the beneficence of his Creator surround him with every blessing necessary for his happiness whilst the species endures.

But as man has been the last to come into this world, he may be taken from it long before the final decay of all things; for God in His love for His favourite will inflict no suffering nor withdraw any provision created for his benefit, whilst the species exists.

5.—Nature does not appear to take any heed about its past operations being enquired into. It leaves it like a book for our edification. We have nothing to do but turn over leaf after leaf, and penetrate into the workings of the Divine mind in the vastness of the past in creation.

What has been done is open to research,

inspection, and examination, and most of it is now so well investigated as to be beyond the pale of speculative enquiry.

The future is carefully, no doubt wisely hidden from human curiosity.

Nature takes no nations or individuals into its counsels. It reveals its intentions to no one any further than that a principle of forethought necessary for the good of the species, is so far communicated that man knows the doing of certain actions will bring on certain results.

The only courses open to us to rely on, are the perfect, immutable wisdom and goodness of God, who will do all things benevolently and well, and those strict analogies which exist in and through the great systems of planets. If we have got into a right train of reasoning, and discovered the true commencement of that plan, and can trace part of its progress, we may safely speculate on its being continued in the same order and mode to the end.

6.—What are the changes that the constitution of man undergoes, who lives his allotted period of old age? Do not we see the dimness of sight, the failing strength, the fading intellect, the decay of natural and physical power? and at length, when the flickering flame has consumed every particle of oil in the lamp of life, the calm, unsuffering, peaceful dissolution, which, like a gentle sleep, passes the spirit away to its eternal home? So it will be in the closing ages of time, which will pass

away all life from the earth unknown, as a glimmering evening star on some desolate shore droops unseen into the still wide waters, that lie in their solitude under a fading sky.

7.—There appear to be conflicting opinions about the moon, whether it rotates on its own axis or not. In a conversation with one of our leading astronomers some time ago, I was told that the moon rotated on its own axis, in exactly the same time as it makes one revolution round the earth, and that not any discrepancy or departure from this rule had been observed in the last 2000 years. In an article by another astronomer, in one of our leading scientific journals, I read, that the moon does not rotate on its axis at all, that the earth has stopped it, and it is hinted that life has ceased on it, and that a period of decay and desolation has set in. Leaving the learned professors to settle the rotatory motion, I wish to draw attention to the following. There cannot be any doubt, but that the general decay of the planetary system will commence in the satellites as the weakest point, after these the outside planets beyond Saturn will be the first to disappear or dissolve, and so on towards the sun, which will retain its powers of life, but in a faint state, when all else have resolved themselves into their final dissolution. It is so with the decay of the individual species, the extremities die first, and after all else are passed out of the verge of life, the heart is known still to pulsate a brief period in its departing throes; but astronomers

should not say anything about life on the moon, till telescopes are invented which will set them down within five miles from it, as the nearest at which living beings could be seen.

It must be borne in mind, that there are not the same causes in operation why the moon should rotate on its axis, as there are relative to the earth. It was necessary that the earth should revolve, in order that every portion of it might be under the revivifying influence of the sun daily, and for other purposes before mentioned, but it was not necessary for the moon to rotate on its axis for the purpose of receiving the sun's power on every part of it; it would receive that without, subject to its day on its surface being of the same length as its period of revolution round the earth. Nature never does any needless work. It would not rotate the moon without it was necessary for a purpose. It is stated the moons of Jupiter are similarly stopped, do not rotate. The question is, did our moon ever rotate, what evidence is there of it? I am no believer in the earth having stopped the moon's rotation, because I do not think nature does its work in that way.

8.—When we witness the rapid progress making in machinery, engineering, chemistry, and electricity, facilitating communications of ideas amongst nations, and hastening civilization by personal intercourse and interchange of manners and customs, and are aware of the speed with which inventions are developing the powers of

nature for man's social improvement and benefit, one would be led to think the consummative period of his existence on earth was not far distant. A check, however, falls on these aspirations, when we take even a cursory glance over the present state of the globe. A great portion of it is still in possession of barbarous and uncivilized communities, and vast countries are yet unpeopled or sparsely so. One of the continents of the globe can scarcely produce even a strip of a border of civilization, and its vast interior, its deserts, its table mountains, its magnificent lakes and rivers, have all to be brought into possession of intellectual and trading communities. The pioneers of coming superior races have only just commenced penetrating into its unknown regions. Long periods of time have yet to elapse before Africa will fill its destiny in its place on the earth, or railways go right through from Sierra-Leone to Galla, or from Loango to Zanzibar. The same may be said of Australia, which has little more than a coast line of Europeans. Then, what about the mountain steppes of Mongolia ; the wild, thinly peopled regions of Siberia; of the north-western portion of America; the vast thinly inhabited regions stretching west of Canada, by lake Athabasca, the Rocky Mountains, and the shores of lake Winnepeg? all undeveloped regions, with their metalliferous riches unknown. The vast icy countries of Greenland, of Russian and British America. All have to be filled with thronging multitudes of intellectual, peaceful inhabitants.

But we have no need to go to the ends of the earth to seek employment for our good-will to men. In our own country, probably the most civilized, intellectual, and religious country in the world, there exists such an amount of depravity, want of education, crime of every dye, poverty and sin, as perhaps no nation in the world can excel.

Such is the state of ignorance of many of our eastern and south-western counties, that witchcraft is still believed in, and wizards and witches are to be found wherever there are dupes to part with their money on them.

The sum of these present conditions of the earth shews the time is far distant, probably many thousands of years, before it will attain to that perfection of population, communication, power over its productive elements, riches, and general happiness, which lye before its magnificent future.

9.—Then will nature concentrate all the impulses of ancient empires, which have stamped their sublime energies on time's histories; and by their virtues, conquests, that primitive nobility of thought and action which enveloped with such a paraselene of light the advent of man's breaking the stern barriers of animal existence, and rising into the intellectual glories that awaited him in commerce, art, and science; unite the acknowledged congruous elements of that concatenation of events that was preparing mankind for their future government and elevation.

The very mingling of mind and nationalities that must necessarily ensue from the facilities of intercommunion, that are evident in the coming social intercourse of peoples, only preludes a union which is an intention of the Divine worker of man's destinies. But in this universal humanity that is to precede the coming perfection of nature's object in man; the ancient efforts of the species will not be without their influence on the character of the societies that have to occupy this world in its more enlightened future. The tabernacled magnificence of the Ancient Israelites will again shine as the "ephod and breast-plate" of old, but it will be in the still more brilliant jewels of science. The patriotism and mental vigour of Greece, which still gleam with undying glory from the Propylæa, the Olympian Jupiter, and the almost life breathing forms carved by Ictinus, Scopas, and Praxiteles, from the Pentelic Marbles, which, like beacons on the mountain cliff, have been the light and life of architecture to this day, will again spread their classic beauties over the assemblies and cities of earth, when that final flood of genius shall open its streams of art, which are yet stored in the fountains of nature's inexhaustible riches.

Nothing is lost or is temporary on this earth. Every operation on it, of the most ancient times, whether geologically, civilly, or socially, had its foundation, not only for its then necessity, but for a prospective purpose, which will fulfil its destiny whilst the earth endures. There is a similarity

and uniformity in all the operations of the Divine Intelligence, which leads us to connect the links of the great chain of events and existences on this planet into one unbroken series. The earth has its solid impenetrable foundations, without which its external loveliness would never have been. The plant has its roots in the ground, which, hidden and invisible as they are, are the sources of all the lovely Flora the sun shines upon; and society has sprung from a base, which had a latent meaning of stability, as the first stones of the great edifices of nations.

Babylon, Nineveh, and Thebes, were as necessary for the foundation of that union and civilization of multitudes to realize power and greatness, as London, Paris, and New York are to continue their world-governing energies; and in the future of the planet's history, time will raise up cities of still greater importance, whenever progressing science, art, and commerce, shall press their western course on the tide of populations, which seem steadily streaming in that direction now as in the past. There is not a nation of importance that has flourished in the historic period, from the pomp, and pride, and art of Ancient Rome, to the brilliance and finish of modern Paris, but will be connected with and influence coming nations in their modes of existence, manners, habits, and other formulæ of the societies which will reign and govern the future earth.

10.—There is a principle forming a base of

character, which appears to have been hovering, and moving around, amongst individual nations, which has to receive a circumfuse element, concentrating its varied energies in one uniform union of the higher excellencies and attainments of man, into a grander and more sublime expression of personal beauty, mind power, and moral dignity, united with more diffused gentleness and suavity between man and man, nations and people, that will spread the beneficent intentions of the Deity over the whole population of the globe.

The genius and *gusto* of the Italian; the solidity and thoughtfulness of the German; the vivace and brilliance of the French; the high souled rectitude and impressive power of the English; the pushing, unbending energies of the American; and the poetic imagery of the East, are all so many streams of the Godhead's elements of life, rolling onwards through the vistas of time, to meet and be absorbed in that collected ocean of perfection, which awaits mankind in that period of union of the families of earth, whose crowning glories are just dawning into light.

11.—Contemplating these analogies, which seem to run in one unbroken, undeviating course, through all nature, animate and inanimate; we can come to no other conclusion than this, that man will eventually decay and disappear as a species, similar to his decay and disappearance as an individual. From former passages in these pages

it will have been seen, we consider him many thousands of years from his utmost perfection on the globe; the argument being based on the condition of the earth at its present time, in its unpeopled, uncivilized, unintellectual, and divided state. If fresh continents have to rise from the ocean, still larger periods must be drawn upon. The culminating time of his existence may endure ten thousand years, it may be much more, we have no data to found any ideas on this subject, all is speculative thought. We can only reason from the past and present. The future is in the hands of an all-wise Intelligence, who will reveal His great scheme of life in His own good time, and in His own beneficent way. But as man is now progressing in thought, in science, in the occupation of the earth by the superior races, in mind and physical power, and in more intermingled union with each other, this progress must go on; and as I have shewn that nothing in life, mind, or matter, can continue to progress; the earth and man must attain to the high destinies of the Divine will, which, like the most intellectual period of individual life, will last a certain time in a state of refulgence we at this day can form no conception of.

Then will religion and virtue go hand in hand; at present we often see the strange anomalies of a man sound in religious faith, with very loose ideas of that immaculate rectitude of conduct which ought to accompany it; and we find the still greater anomaly of a high standard of moral perfection amongst those whose religious faith is as

impenetrable and undefinable as the myths of modern mediumism.

Then will man be as one family on the earth, each individual doing his duty in the vocation God has fitted him for, each supporting the great fabric of the world-wide civilization, which will reign in the coming millennium of its power. At present, ignorance, crime, idleness, and sin of every dye reign so triumphant, one third of the world's inhabitants do all the work, and support the remainder.

See'st thou the flowers of earth, those jewelled sparks of the Divine mind, which provide honeyed nectar for fairy winged insects, and sweet scents, lovely colours, and still more lovely forms to decorate and delight the bride at the altar, strew the path of life with one continuous train of beautiful forms, and shew to man there is something more in nature than gold, and silver, and precious stones. There is the sweetness of innocence, and the playful scintillations of the Deity's reflection of ideas in form, and the instruction to man to imitate his Maker, and bend from the stern duties of life, and know that loveliness and beauty are a part of the Divine manifestations in creation, which should engage the affections and soothe the wear and tear of daily labour and anxiety, and which reveal to man the care and benevolence of God, who provides all treasures and blessings of earth for his admiration, to calm and beautify his every path in this seeming rugged world.

Yet are these only typifications of that progress

of the Creator's intentions, which is now winging its flight in the profluent energies of our nature. For the flower rises from its seed in the quiet earth, and shoots up into existent being, and the leaves spread their infinite variety of beautiful shapes, and the bud begins to develope the purpose of its Creator, and in due time the sun, and the shower, and the passing air, and the fruitful soil, have brought out the great Designer's work, and the glory of the flower bursts into view, glittering and rejoicing in its inimitable tints, its exquisite forms, as a thing of beauty and expression of the Divine thought. So will it be with the rise, progress, and consummation of man's occupation and transition, through the period of his existence. We are only arrived at the cotyledonous state of our progress. The flower of manhood has yet to open its glories to intellectual multitudes. Then all the resources of the world will be placed at his feet. All the powers of the Deity's benevolence will encompass him. He will walk the earth in the fulness of his riches, and penetrate into the mind of God by the ripeness of his wisdom. Communion of thought will only be rivalled by the lightning's speed. The beauty of truth will dictate his every imagining, and the holiness of religion and virtue will reign as a queen on the throne of his affections. All his evil passions will be subdued. The love of God, the love of his fellow creatures, the love of all created things will fill his heart with peace. He may govern and guide the elements in their swiftness and power. He will sail his bark with safety

through the wildest storm, for nature will make him the conqueror of itself.

All hidden fountains of nature's secrets will open their streams of Divine Intelligence, so that all knowledge his soul may desire will be revealed to him. The earth will perfect her products for his use, so that his fields will be full of plenty, and his granary filled with the fruits of his labour.

The heart's best affections will expand to the divinity of the love that is within him, for the will of God will be man's desire.

Then will man have made the earth a garden of delight, and the sun in its daily course will shine on nations rejoicing in their gladness; for God will reign on the earth, and sin will melt and dissolve as a cloud before His presence; and lust and crime will be shamed from intellectual manhood; and a purity of soul will rival the angels, which like the "gold, and blue, and purple, and scarlet, and fine linen,"* shall be clothed in white, even in "fine twined linen." Then will the intellect and genius of man attain its zenith of power, and the arts, in the magnificence of their representations, and the subtilty of their penetration into the Deity's effects on earth, will crown the majesty of man with the splendour of its most learned and final efforts; and sublime poetry will revel in a universe of imagery, passions, descriptions, and imaginative conceptions, the result of the world's life and experience. Then will music float over the refinement of taste, like a softened, dreamy,

*Exodus, c. xxviii. v. 5 and 6.

golden cloud at sunset, and science shall have opened every source of power, and given to man all the excellencies of mind, and mysteries of the world's faculties, in powers present and yet to be revealed, for God will never leave a power short of its utmost perfection, His work will be done. Then the Divine effulgence will be felt as a light, dazzling nations with awe, wonder, and adoration, as it glitters around the summit of man's righteousness. And in the crowning of his beauty and excellence, God will finally walk with him as a friend and companion, speaking to him of His created glories, and whispering of His everlasting love to the just and perfect. In his latter days he will have gathered all the treasures of the earth around him, and his homes will be of that calm spiritual peace which is the reward of life well spent and a destiny accomplished, and in the fulness of his time he will look with a strange sense of sorrow and joy through the vistas of long ages, tracing his own wondrous terrestrial being, and gazing into that heaven of heavens prepared for him, calmly rest in the bosom of his God.

CHAPTER XIV.

1. Speculative Futurity.

1.—We must now venture into a region of speculative futurity, with nothing to guide us but that analogy between the individual man and his species, which we believe will be strictly maintained unto the end. If it be so, then will mankind never return to savage life or to the sources from which they commenced.

The hale old man, who attains to the fulness of his allotted years, preserves his power of mind almost unimpaired to the last. He is covered with dignity, and has around him a halo of admiration and reverence, the reward of a life of well spent labour.

Having done the will of God on earth, his master does not forget or desert him in the decline of his days. He is as the sun at its setting, which after a day of light, and work, and usefulness, increases in the splendour of its surrounding loveliness, and sets amidst the most gorgeous celestial glories the heavens can produce.

He has fought the battle of life, journeyed over its stony paths, mounted the rocky hills that seemed to forbid his onward way, and having struggled through many a storm, through all apparent evils of opposition, neglect, contumely, hard knocks and blows, and a thousand obstacles

that at first sight seemed insurmountable, and destined to blacken his fair fame, and doom him to early perdition, he lives and works through it all, and arrives at a peaceful home, peaceful in contemplation, in recollections, in future hope, and in calm reliance on his Maker, that all will be well with him who rests his faith in God.

Thus will man approach the period of his accomplishment of the Divine purpose in his creation. That creation and purpose will consist of long ages of universal happiness and peace on earth, for God will increase His glories to the end of his occupation of the planet.

There will be no violent disturbances of nature while he is on earth, nor for ages after all life has disappeared.

The cessation of organic existences will probably be as long in time, as silent and mysterious as their coming into living being. We know not yet, but we shall know, when and how the Fauna of the earth were produced, but we may not know how they will retire, or whether it will be in the order in which they came. If it be, then we must look in the silurian rocks and those immediately beneath for the last forms of life that will inherit the earth, previous to its final dissolution. There may be resuscitations, but it is not likely any new creations will take place at this late period of the planet's existence. All these events will most likely endure long ages of time to be accomplished, as they did in their creation. We do not think there will be any violent convulsions, or breaking

up of the earth's crust while life is on it. The same wisdom, care, and benevolence that brought man through his first struggles for existence with the earth's Fauna, that laid the world at his feet to conquer, subdue, cultivate, and enjoy; that will crown the day of his perfection with a calm and dignified happiness, founded on the sanctification of his nature in holiness of life, will abide by him to the end, and protect and preserve him from all natural suffering that might ensue by the commencement of the dissolution of the great fabric of the planetary system.

Imagination follows him in the closing scene of fading time, wandering about the ruined temples, the broken pillars, the flowerless gardens, the desolate silent streets of ancient cities, where multitudes in past ages swayed the assemblies of people, rending the air with the shouts of conquerors, or the wail of captives; venting the exuberance and enthusiasm of passion in the wild ecstasies of pleasure, or lifting their hearts to heaven in the sublime chorals of human devotion. And, as the shades of coming night spread a foreboding dimness over earth's fallen treasures of architecture, a sun of fading power may gleam in a solemn glow on the remnants of stately columns and arches, tinging them with a crimson glow, strangely in unison with the silence of the scene, as one of the last of his race stands contemplating the boundless shadowy stillness of the departing greatness and grandeur of time.

The most careful thoughts, the result of the

examination of nature's evidences and analogies, point with unerring precision to the fact of the decline and disappearance of man from the earth; and the slow, gradual, but certain dissolution of all things, when this great globe, and all the planets, and the sun itself, will have finished their work, and resolve themselves into their original elements from which they commenced their sublime career of life, beauty, intellect, and subservience to the Divine purpose in their creation.

There is a God, an Intelligence of nature, of such omnipotent power, wisdom, and goodness, as to be able to order, create, sustain, design, govern, and *finish* His works, and thus carry out a certain mode of development of the powers of matter, which are without controversy the best and wisest things that could be done.

Mind and language sink into insignificance at the attempt to describe the sublimity of a world and system in a progress of decay.

When man has long passed away from the silent ruins of earth, some bright spirit may hover around the departed greatness and intelligence of this now beautiful planet, and gaze in wonder at its ages of the glory of nations in their power, its memories of the loveliness of earth in its animals, flowers, trees, and fruits; the wondrous power that made and kept in bounds the swift winds and the wild ungovernable seas, the beauty of the clouds, the magnificence of its mountains and waters, and the heavens by night and day in their shining splendour. Looking through the memories of man's

triumphs, it will dwell on the great minds of earth, who have been God's vice-regents here to do His will; those who have moved and created empires, and sustained them in their greatness and power, changing the dynasties and destinies of nations, raising or destroying them with the magic wands of philosophy and eloquence; and strange thoughts impress the mind, that kings, senators, and peasants, wise and ignorant, the inheritors of riches and poverty, the good and holy, and the sinful and criminal will all lie quiet in the same dying dust of the dissolving earth, for nature will know no distinction here, it will be in the future of heaven's intentions, that the patriots, the high and upright spirits of the world, will shine as the stars in their eternal reward.

Imagination dwells in that spirit's thoughts as it contemplates the vast ages, the millions of years that have elapsed in the re-formation of this earth, the long periods of the mere settling or laying the foundation of a world in the granite and superincumbent rocks. Nature would introduce life as soon as the earth was capable of supporting it, as is evident by the fossils contained in the early rocks above the conglomerates. As the earth increased in its powers of sustenation, fresh species were introduced. Most of them lived their preparatory period of undoubted usefulness, till the progression of all the Fauna and Flora of earth introduced man, when everything was prepared for God's finished creation. All this brief description would occupy ages upon ages of time, several millions of years may not cover it.

At this last period, the mind dwells on the progress of peoples and societies, the vigour and intellectual power of nations, as of Greece and Rome. The busy multitudes of enlightened cities pass in the moving panorama. The virtue, the wealth, the luxury, the nobility, the physical power, the mind power of man, shines like a morning star of light, whilst the sin, the depravity, the poverty, the utter debasement in God's greatest creation, which has existed on this earth, passes like a cloud, dimming the beauty of the world's excellence and loveliness. The loves, the intrigues, the ambitions, the self sacrifice, which imitates the essence of God, by seeking its own happiness in making others happy; the accumulations of knowledge, and the accumulator of mind in scientific power, man's integrity, lovely woman, whom God has provided with all purity of thought and purpose, and has created the diamond, and the golden ornaments, and the emerald, and the ruby, and all precious stones to deck her angelic brow, and has clothed her with all intellectual beauties of virtue and innocence, and witnesses at the same time the most melancholy and sorrowful sight this world can produce, a debased, shameless woman. The pomp and horrors of war, that mystery of earth. The cruelties of man to man. The cruelties of man to all life. The consummate wickedness that exists, and mingles with the most God-like angelic purity and goodness. The enterprise, the commerce, the religions, the strange creeds, the thoughts, the glories of the arts, and the

final sublimity of man's rising from the evils of nature, and dwelling for a long period in the beauty of holiness, and the companionship of his Maker; the spirit gazes on the continuous surging, flooding streams of life and its events, which pass in the mingled lights and shadows of the world's history, as time closes around it, the coming night of its final dissolution.

On the disappearance of man from the earth, it will gradually be converted into one universal wilderness. The remaining Fauna of the earth will quietly retire from life, and the scenes of solitude, silence, and desolation that will ensue, are beyond the utmost stretch of poetry to describe.

The mountains of the earth will begin to crumble and give way before the power of the elements destined to destroy them. This process may be seen now in operation, as for instance in the lake district, where, those ancient rocks the Grauwacke,* are in many places perforated into mere shadows of their former substance by the action of the atmosphere through long ages of time.

Long periods of time must be allowed after man has departed, when the remaining animals will probably partake of the general depression of energy in life, as they hasten to their final exit from it.

Reflection on the early appearance of this planet before any life was introduced conjures up picture after picture of wild desolation and

* There are numbers of rocks and stones in this condition on the top and sides of Coniston Old Man.

grandeur. The changes through vast periods of solitudes in the upheavings of land and mountain, the barrenness of the earth, for nature would not create food for animals long before they came. The scenery of the earth must have been of the most wild, uncouth, and savage description. Probably a million years would pass in the silence and solitariness of lifelessness. As the period of the introduction of life would be approaching, nature would first begin its green covering of incipient vegetation, which appears almost solely for the two purposes of food and beauty. Animals could not be introduced into life before organized matter was ready for their sustenance, for no animal can exist on inorganic matter.

If these scenes of wild primitive beauty existed in the preparation and formation of the globe for its future Fauna, and the beautifying the earth for man's occupation, we must look for similar effects when man has finished his work here, though the changes that will ensue, will probably be more rapid in their decay than in their formation.

Geology will teach us how to invert the order, so as to obtain a glimpse of that wondrous future which no human eye will be left to see.

The voiceless forest will no longer ring with the songs of birds; desire and enjoyment will depart from their bright-plumed panting breasts, and their wings will droop in enervation in the changing atmosphere; and animals no longer surrounded with the care of man, will wander amongst the jungles and rank grass, and die in

holes, and caves, and corners of the decaying earth, and disappear; and the insect and the butterfly will no longer wander wavering with sun-lit wings amongst corn and wild flowers through the live-long summer's day, for nature's beauties will have fled, and they only lived for beauty and delight.

Then will the bones of the last remnants of life lie unburied amongst the stones of earth, and bleach in their whiteness under the pale, cold moon; for the spirit of life, which had imbued all matter in the planet's existence, will have departed for its appointed season, and the earth will be void of revivifying powers. It is so with man, and the analogy will be strictly observed.

Then will the earth lose its lovely floral covering, the flowers will dwindle from their bright sunny glories, the trees fade into leafless barrenness, and the sweet green of earth will pass away, for where nothing is required, nothing will be continued.

The green eye of the serpent and the crawling worm will close the long ages of life, that have swayed the destinies, and lived in their happiness or misery, on this beautiful world.

Life being withdrawn from the earth, nature will begin to develope its wonderful powers, changing its wild ruins as it hastens to its dissolution. Then will the sea murmur amongst lonely solitudes, and about wide wastings of the earth, and foam powerless over barren decaying rocks, and its brightness will be dimmed, and its sparkling playful waves will moan in the sullenness of its complete desertion, for it will be one wide untracked

waste of waters, its brilliance of ocean lights, its wild tempests and storms of terror and darkness will rest in gloom and silence.

Then will the moon, whose disc of once silvery brightness, which shed such sweet solemnity of light over earth's illuminated life-stirring cities, rise with pallid age depicted on her time-honored beauty, and casting down mournful shadows and faint hues over the remnants of ages in their seeming eternal sleep, call forth no echo of poetic response; for the heart and energy of man will have departed, and the fire of his genius will be extinguished, and there will be no eye to watch her path amongst the still and everlasting glittering flames of the distant skies, for earth will be one universal grave.

Then the sun will have lost its influence and power over the planetary system, in consequence of its sources of supply being withdrawn. Its brilliance and intensity of light, which once dazzled the eyes of mortals, so that it could not be looked upon, its heat, which sustained all life in the planets, and filled the vast sphere of its system, extending its influence to its utmost bounds, will all have drooped into utter feebleness, and its faded glory may only be visible as a dull, red globe, in a universal dark-blue sky.

A twilight of unearthly solemnity will brood day and night over the ruins of mountains, and the unfruitful plains, and lifeless rivers of earth, which will lie in quiet waiting as they dissolve in the silence of departing time; and the planets through

their period of decay, may lie under a buried blackness of darkness, wasting through long ages of desolation silently away. Fire, water, vapour, and the varied elements will expand their wondrous powers of destruction, till in the vastness of its final dissolution, the earth, the sun, the planets, and all subsidiary objects in space, will melt into the last incandescent mingling of the system, which as it commenced, when "the earth was without form and void, and darkness was upon the face of the deep," so it will end. Time and being, light and love, and life will be no more; till in the period of its appointed repose, God will again call it forth to its everlasting work, in the vast infinitude of its eternal destinies.

ADDRESS TO THE DEITY.

Spirit of Light—
Whose temple is the infinite;
Whose presence fills the boundless space
With living heavenly fires. Whose meteors trace
Swift star-trained lines of beauty as they move;—
Thy name is love.—

Almighty Power,
Creation's life. From the first hour,
When light dawn'd o'er the watery deep,
And the young earth dreamed in its infant sleep
Of coming time; who formed the wondrous plan,
Whose end is man?

Ancient of time,
In whom the memories sublime;
Th' infinitude of all things dwell:
What mind can compass Thee, what tongue can tell
The wonders of that life and death, so vast,—
Th' eternal past?

Great God—alone.
Earth dimly sees thy sun-lit throne.
Thought wanders, wildly wond'ring, far
'Mid the night's myriads, where each heavenly star
Seems an interpreter, speaking of Thee,
What is to be.

To live.—To die.
To waken to earth's doom; and why?
To breathe in mysteries; and gaze,
Through heights and depths, into a whirl and maze
Of endless life; though seen, not understood:
Yet all is good.

Thou art the source,
Whence all life's streams their onward course
Flow swiftly; some to flowers and light;
Some to dark breakless clouds, a living night,
Which has no hope, trembling in dull despair,
Its future,—where?

What is beyond
This life? Man's aspirations, fond,
Desiring, hopeful, cling to Thee.
This longed for immortality *must* be.
There is a bliss awaits the parting breath;
A joy in death.

A something dwells
In the heart's life, which silent tells
A God is *here;* and the mind roams
O'er realms of brilliants, amongst starry homes,
In listenings of imperishable thought,
Which Thou hast wrought.

All nature seems
A universe of solemn dreams,
A myth we cannot comprehend.
The past, the present, and the cloud-veiled end,
Still broods impenetrable to our sight;
A starless night.

O God of might,
Invisible to human sight,
What are we? breathing for a day;
Floating on waves of time, then pass away.
A faint, dim glimpse of th' eternal "*ONE*,"
And we are gone.

Are all things God?
The great magician lifts His rod,
And, lo th' eternal spirit flies
Into all forms of life, in earth and skies:
'Twould be a blissful thought to know that we,
Were part of Thee.

Ye hosts of life,
In battling, struggling, crowding strife,
Hastening with impassioned breath,
Along the world's dark thoroughfares, to death.
Are your hopes true? whose light so fitful gleams,
Or are they dreams?

Spirit of light,
Oh spread thy glories to my sight.
My soul seems moving to the skies.
Some truths above all other truths arise.
Who seek the golden gates that lead to Thee.
"WORK" is the key.

W. G. H.

1869.

A. AND D. RUSSELL, MOORFIELDS, LIVERPOOL.